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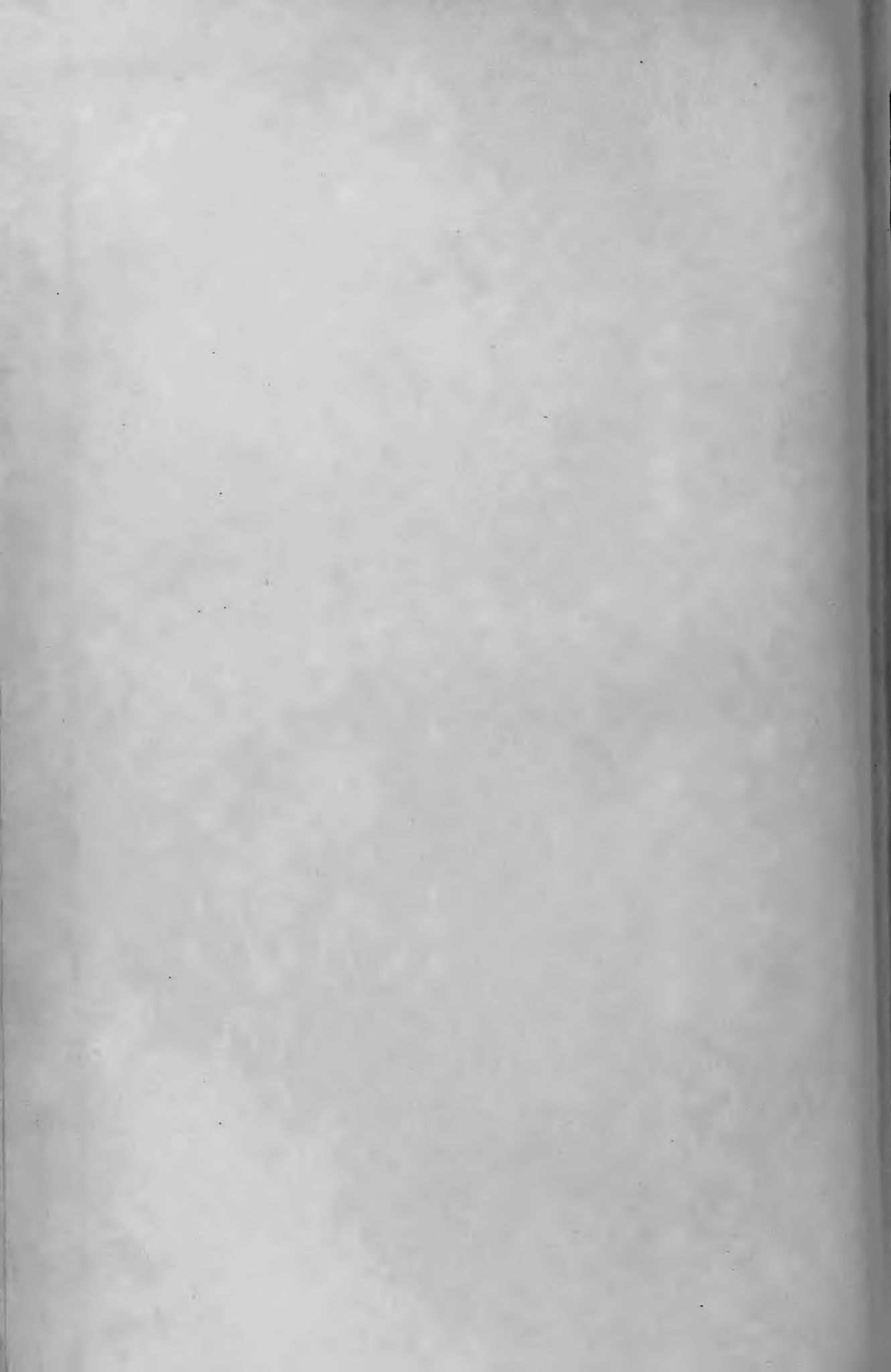
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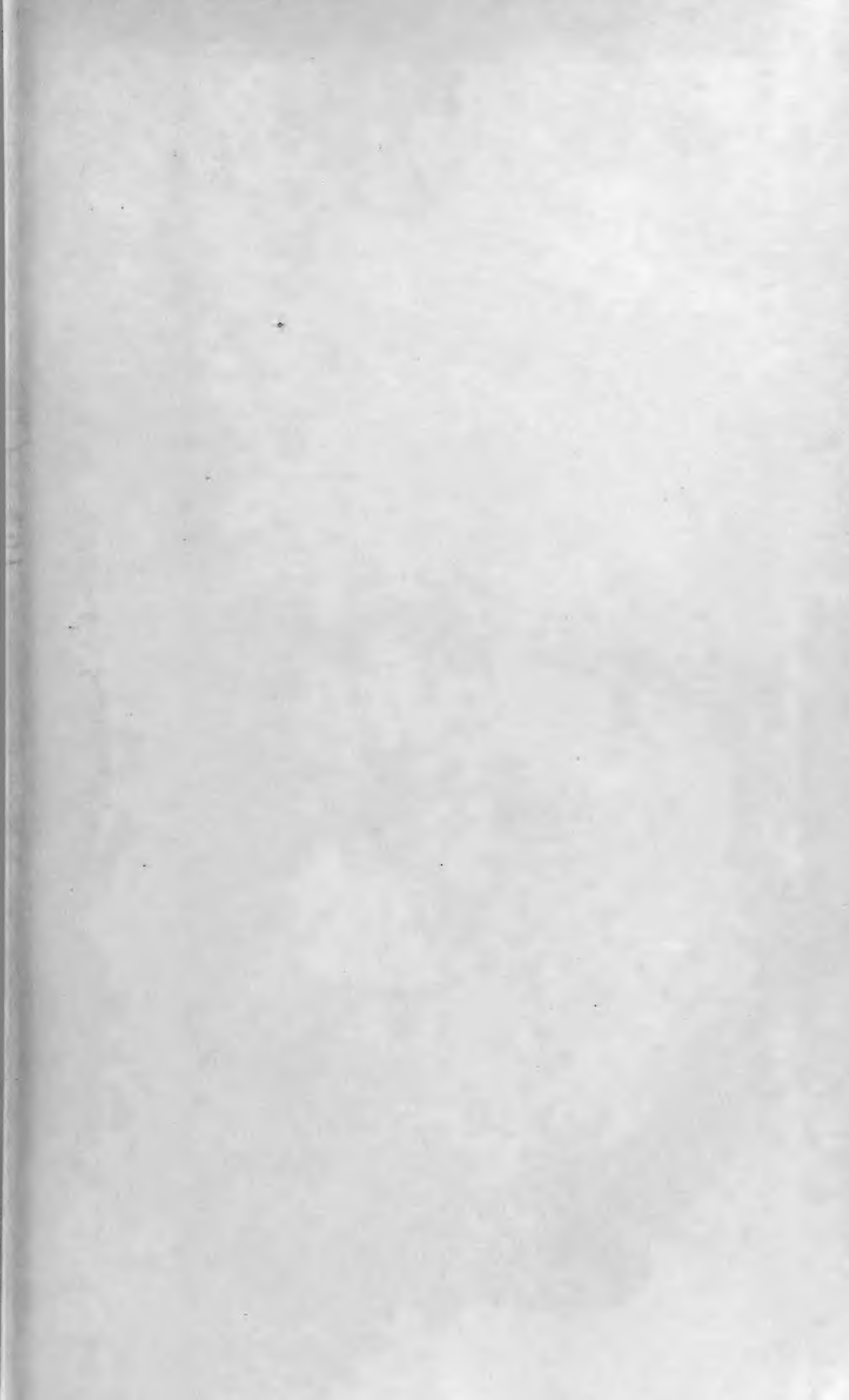
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BRITISH BIRDS

WITH WHICH WAS INCORPORATED IN JANUARY, 1917, "THE ZOOLOGIST."

AN ILLUSTRATED MAGAZINE DEVOTED
CHIEFLY TO THE BIRDS ON THE BRITISH LIST

EDITED BY

H. F. WITHERBY M.B.E. F.Z.S. M.B.O.U.

ASSISTED BY

Rev. F. C. R. JOURDAIN M.A. M.B.O.U. H.F.A.O.U.

AND

NORMAN F. TICEHURST O.B.E. M.A. F.R.C.S. M.B.O.U.

Volume XIX

JUNE 1925 — MAY 1926



H. F. & G. WITHERBY
326 HIGH HOLBORN LONDON



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JUNE 1.
1925.

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No. 1.



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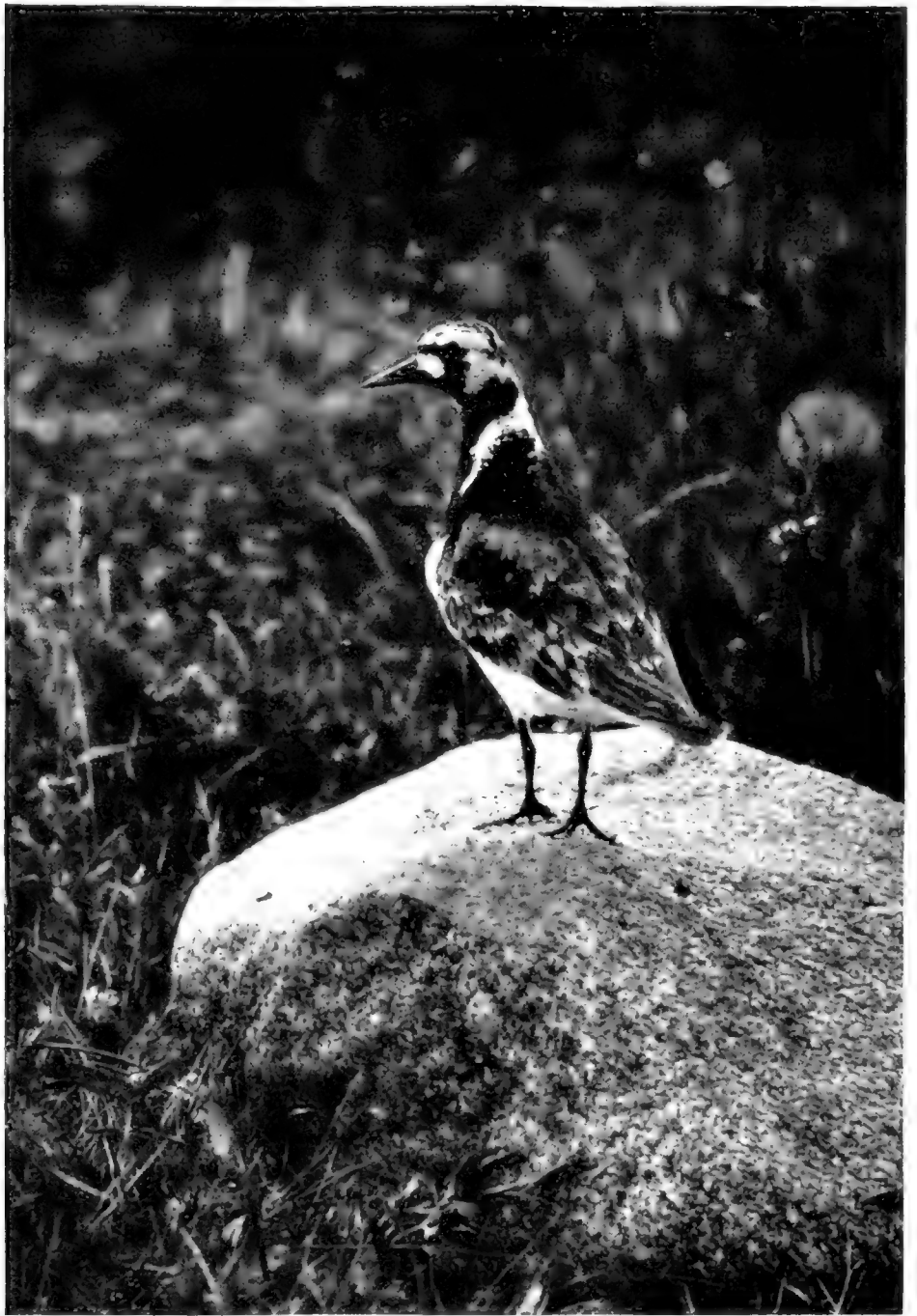
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TURNSTONE: IN A TYPICAL ATTITUDE.

(Photographed by Ralph Chislett.)

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TURNSTONES ON A BALTIC ISLET.

BY

RALPH CHISLETT, M.B.O.U, F.R.P.S.

AN unexpected result of our trip to Öland of 1924 has been the belief that, given time and favourable circumstances, I could find Turnstones (*Arenaria interpres*) breeding in the Shetlands were I to visit those fascinating islands again. I saw Turnstones on my last visit, though they showed no signs of breeding; but neither did the birds we saw in the south Baltic, until we had closely narrowed down the locality of a nest.

Saxby's description of the nest and eggs he discovered in Shetland some fifty years ago, although unsupported by evidence acceptable as complete proof, is unmistakeable enough to leave little room for doubt as to the truth of his record. And he adds, "I have no doubt that if some of the smaller islands were carefully and patiently searched, other nests would be found." The Turnstone's breeding range in the Baltic begins considerably south of Shetland. Danish ornithologists tell me that the species breeds on their side of the North Sea, on both sides of latitude 56. Shetland, the bulk of which lies north of latitude 60, is on a regular migration route of the species. Some birds always appear to remain through the summer, but with so much scattered, suitable ground available, the would-be finder of their eggs, in the absence of a stroke of extremely good fortune, would need to devote his time to the one species until rewarded by success. Few of those who go so far feel they can afford to do this, which probably accounts for the fact that the Turnstone is still unrecognized as a British breeder. This description of our experience with the species on an islet off Öland may perhaps be of service to one who would seek to alter the status of the Turnstone on the British list, and who has the opportunity to make the attempt.

I was accompanied by my wife and our friend Jasper Atkinson, a fellow-member (now President) of the Zoological Photographic Club—that club to which every photographic ornithologist should belong whose work is sufficient in quantity and quality to enable him to fulfil the obligations of membership.

On June 4th we landed on one of the landward points of the rough triangle of which our little, low islet consisted, and as we did so two Turnstones flew silently away in the direction



TO THE LEFT REAR OF THE NEST.

(Female Turnstone)

(*Photographed by Ralph Chislett.*)

of the seaward angle. In length the triangle's sides approximated three-fourths of a mile. The side the birds had followed had a narrow, stony beach, rising rapidly and merging into a low hill some 30-40 feet above sea-level, and covered with long grass and much tall, umbelliferous growth. In the cover a few pairs of Velvet Scoters (*Oidemia f. fusca*) nested. We followed after the Turnstones, but no others were seen until we had rounded the beacon marking the next angle, where a bird was seen on a rock well out in the water. Here a considerable search was made, during which the Turnstone disappeared and was seen no more.

Along this, the seaward side of the island, nothing of interest was seen beyond Common Gulls (*Larus c. canus*), Arctic Terns (*Sterna macrura*) and Ringed Plovers (*Charadrius hiaticula*) until we had passed two-thirds of its length, when another Turnstone was seen which called once or twice half-heartedly. Protracted search revealed nothing more exciting than the nest of a Redshank (*Tringa t. totanus*) in a narrow patch of grass under the lee of a large rock. The Redshank called frequently, and a second Turnstone appeared on another stone in the water. More for the possibility it gave of observing the Turnstones than for any other reason a hiding-tent was left by the Redshank's nest. For a similar reason a tent had been left by a Common Gull's nest near to the beacon. The Turnstones had displayed no anxiety and very little energy, and when we left that day our hopes were not very bright.

On the following day both Atkinson and I passed some time in the tents without seeing anything indicative of breeding Turnstones. The same pair of birds flew away from the apex as we landed, they had doubtless watched our approach. Round the second point a bird was seen again, but it soon disappeared behind the bluff on which the beacon stood, and did not return. The Redshank's neighbours were there again, but further away, and one of them called faintly a time or two. Systematic search over shingle and in herbage amongst rocks revealed nothing. On the landward side a Turnstone was seen standing, unconcernedly as usual, on a stone in the sea. Disappointment had taken the place of hope when we left that night.

On June the 19th Atkinson followed the same direction round the islet as before, whilst my wife and I reversed it. Less than half-way along the landward side a Turnstone was noticed at the water's edge before us, and by flights of varied lengths it continued to keep some hundred yards ahead.



THE SITE OF NEST NO. 1.

(Some herbage has been removed.)

Male Turnstone sitting.

(*Photographed by Ralph Chislett.*)

When we reached the end of that side it stood on a rock a similar distance out in the sea, and waited there until we had passed far enough along the next side to lose sight of it, without doubling back or doing anything which a non-breeding bird would not have been equally likely to do.

One of the Redshank's Turnstone neighbours called as we came up. This was the only one of three pairs which ever uttered a sound in our hearing. I see from my note book I rendered the call at the time as "Tcherwio-tcherwio, sometimes repeated half-a-dozen times so as to form a rippling whinney." After a little preliminary search we selected a spot which commanded as good a view as the broken nature of the ground allowed, and fixed the tent against a rock. When I had entered my wife walked away to see how Atkinson was progressing—also incidentally to beguile the Turnstones. Soon afterwards both Turnstones flew to rocks some fifty yards away. After a few minutes one of them flew to the edge of the beach and ran up and along past me, less than a dozen yards away. This looked like business, although the bird soon flew back to its mate. Against the sky, not more than thirty yards away, appearing over the top of a rise in the ground, as seen from the hiding-tent, was a group of chervil flower-heads. One of the Turnstones, on taking wing, flew directly to these flower-heads and appeared to settle in the midst of them. After giving the bird time to get settled on the eggs (I hoped) I crawled out of the tent, and keeping low was within six yards of the chervil clump when the Turnstone took wing from a point two yards on the other side, repeating its cry much more meaningfully than hitherto. I had been prepared to find the nest under shelter of some sort, but had not expected the eggs to be so completely hidden from view as proved to be the case here. The nest lay on the seaward side of the clump. To obtain a view for the camera, a tall chervil stalk, some leaves and grasses, had to be removed. The definite scrape was lined with bits of seaweed and dry grass stems to a depth of more than one inch. The four eggs were greenish in ground colour, mottled and blurred brown over grey, underlying markings.

A hiding-tent was fixed, but as the bird had not returned in half-an-hour it was moved a little farther away and I left ostentatiously. Before leaving the island I paid another visit to see if the bird had returned; it had.

On the landward side of the island, on a spit of grass mingled with thrift and clover, a number of pairs of Arctic Terns had eggs, and, in a few cases, young. As I passed on

my last journey. I fixed and left the second hiding-tent there, then passed on to the landing apex to pack up for the day. I had seen no Turnstone as I came along, nor as I fixed the tent; but on looking back saw two birds on rocks by the water's edge nearest to the Tern colony. I sat down in the long herbage, and, after I had watched through binoculars



AN OPEN SITE.

Male Turnstone sitting.

(*Photographed by Ralph Chislett.*)

for some ten minutes, one of the Turnstones flew to the top of a large rock to the landward side of the Terns. Thence it jumped to the ground and was eventually lost in the cover.

On the following morning we searched all the chervil and other clumps near to the place of disappearance without success. Then I passed on to photograph the birds whose nest I had

found the previous day, leaving Atkinson in the tent among the Terns, hoping he might repeat my experience. Before I had entered hide No. 1. I could see J. A. "moving," and on running back to learn the news I heard him shout joyfully, as he pushed in tent supports with eager fingers, "I've got it." J. A. supplies the following note:—

"When Chislett left me in the tent among the Terns, these birds returned to their nests quickly, and no doubt were useful in establishing a feeling of confidence in the Turnstone. At any rate one of the pair flew past the tent and alighted on the large rock already mentioned. There it remained for two or three minutes, when it dropped to the ground and walked without any further hesitation back along the line of its recent flight, through the thrift, where presently it became invisible. Giving it time to settle I crept out at the back of the tent, and approaching on hands and knees got within three yards before it flew. The tent was then moved and fixed near the nest with Mrs. Chislett's assistance, and in less than half-an-hour, and—for a wader—with very little circumlocution, the bird (which I also judge was the male) was back at the nest, soon ignoring sounds which came from the tent."

This second nest was only some twenty-five yards from the tent as originally fixed and right among the breeding Terns. It was similar to the other nest but had rather more dry grass stems placed around it. The eggs were open to the sky. The spot was some fifty yards from the water on which the grassy spit abutted.

Photographic details were fairly simple, except that the fierce sunlight was entirely from the wrong direction in the case of nest No. 1. These Turnstones usually alighted on a large rock to the left rear of the nest, and, after running to and fro for a while, dropped to the ground and walked to the back of the chervil clump, through which the striking black and white head shortly afterwards appeared. At first, every sound caused the birds to run out in front and along the side of the chervil, thence round and behind the clump again, and so back to the eggs. More than once, male and female were within a few yards of the nest together. In one bird, doubtless the female, the white head-markings were tinged with cream or buff; the size and shape of the black and of the white areas also differed a little. The back plumages seemed to be alike, the chestnut barrings being equally noticeable in all birds at close quarters. The head-dress of both males appeared very conspicuous against the greenery. In the case of No. 1 pair both birds incubated; with No. 2 birds I

spent less time, and only saw one bird sitting, which I believed to be the male, his plumage being quite as unclouded as in the male of the first pair.

A number of nearer views of the female of No. 1 pair were secured by means of placing a stone by the side of the clump of chervil, which she readily jumped upon when making the little circular tour, sometimes waiting there for a minute or two. The second bird flew up from the water's edge to the edge of the Tern colony, and then ran between the heads of sea-pink.

By this time I had concluded that the Turnstone we usually saw round the corner of the second point of the triangle was one of the pair which flew away when we landed, and that they were nesting along the unbel-decked coast between the two points. Photographic work, however, left no time in which to locate this nest precisely.

The outstanding and to us rather surprising feature was the very small amount of assistance obtainable for a long time from the behaviour of the birds. It was our first experience of the species as proved breeders.

MANX ORNITHOLOGICAL NOTES, 1924.

BY

P. G. RALFE.

THE following notes are intended to continue the record from Vol. XVII., p. 229.

CARRION \times HOODED CROW (*Corvus corone* \times *cornix*).—Mr. F. S. Graves writes: "On April 7th, 1924, I again observed a mixed pair of *corone* and *cornix* half a mile to the east of last year's site. On May 4th I located the nest, with the grey bird sitting on it, on a small, grassy cap of an almost vertical fold in the face of a low cliff some forty feet high. The black Crow was on guard, constantly dashing at Herring-Gulls and Jackdaws nesting in the same cliff.

"I visited the site many times from this date, and spent a long time observing the birds. The sitting bird was always the grey one; occasionally when the nest was left for a few minutes the black bird would settle on the grassy cap but never on the nest, and would leave when the other returned. By May 24th there were evidently young in the nest as both birds showed great anxiety when I approached it. On June 11th I could see two young Crows in the nest gasping in hot sun. On the 15th I found two young hybrid Crows on Contrary Head, some 600 yards from nest, and two others still in it. I approached to within fifteen yards of one, when with glasses I had a perfect view of it in good light. Although in the distance it appeared to be dingy black, it was intermediate in plumage, the grey of the back a deep brownish-grey with the feathers edged black. Head dull smoky-black, wings black with dull green and purple sheen. Tail black and still short. Bill deep lead-black. Legs and feet black. Eyes pearl-grey with dark pupil. The grey of one still in the nest appeared to be lighter than that of the two on wing. On June 20th the four young were on the wing.

"On July 20th I again saw this family party of Crows feeding in a field on the hill, the four young birds appearing very dark alongside the Hooded Crow, the lighter parts of the plumage were just noticeable in a favourable light. I last saw the two old Crows with three of their hybrid young feeding on the slope of Contrary Head, near the nesting site, on March 15th, 1925. the young still looking very dark.

"In 1923 I stated from the behaviour and appearance of the birds that the black one was the female. This year the case is reversed, the grey one being the female."

BLACK REDSTART (*Phoenicurus o. gibraltariensis*).—About the new year of 1923-4 one was caught in a yard at Ramsey ; it died after a short confinement.

IRISH DIPPER (*Cinclus c. hibernicus*).—A specimen taken on the headwater of Sulby in November, 1923, was given to the Manx Museum by Mr. R. F. Douglas. This has very dark and uniform upper plumage, red band not extensive or deeply coloured. Mr. H. F. Witherby, who has seen the bird, writes me that it " matches Irish specimens very well and may be said to be quite typical of that race."

HOOPOE (*Upupa e. epops*).—On March 27th, 1924, Mr. F. S. Graves watched a bird of this species on Peel Hill.

KINGFISHER (*Alcedo a. ispida*).—I am told by Mr. H. M. Rogers of another Manx nest. While fishing a small stream near Douglas, he caught a Kingfisher on his hook. He released the bird with difficulty and later traced it (or its mate) to a hole in the bank, which contained three eggs.

OSPREY (*Pandion h. haliaetus*).—On March 26th, 1924, a specimen was killed on a tree at Ballamenagh, between Douglas and Laxey, and has come into possession of the Manx Museum. An adult (or nearly adult) male, it is the first certain record of the species in Man.

WHOOPE SWAN (*Cygnus cygnus*).—On March 9th, 1924, a mature specimen was killed out of five on the small Lough of Gat-e-Whing, Andreas, and through Mr. J. Bell came to the Manx Museum.

BEWICK'S SWAN (*Cygnus b. bewickii*).—In November, 1923, one was killed in the Northern Curragh, and also found its way to the Museum through Mr. Bell.

SLAVONIAN GREBE (*Podiceps auritus*).—In February, 1924, one was shot on a " dub " at Andreas, and given to the Museum through Mr. Bell.

GREAT NORTHERN DIVER (*Colymbus immer*).—On November 27th, 1924, a bird of this species was handed to Mr. F. S. Graves by a fisherman. Its foot had been caught on a hook of a long line, set on the bottom of from eight to nine fathoms of water, some two miles off Peel. These lines are armed with hooks fixed to fifteen inches of snod, six feet apart along the line. A small whiting on the next hook had all the appearance of having been seized by the bird before it in turn was caught on the next one and drowned. It was a fine bird in usual winter plumage, weighing exactly eleven pounds. The birds which are seen in Peel Bay are frequently badly " oiled."

HERRING-GULL (*Larus a. argentatus*).—Mr. G. Preston informs me that in the spring of 1924 a pair attempted to nest

on the chimney of a house at "King Orry," Laxey. The wire guard of the chimney was beaten down to form a foundation, but after about a fortnight's occupation the birds disappeared. In spite of the familiarity of the species in the Manx towns, I have never heard of a similar instance.

Mr. F. S. Graves writes: "A few only of the large number of Herring-Gulls in the Peel district have acquired a taste for young rabbits. I had frequently been told that they had been seen to catch them on the hillside above the west quay, drop them into the harbour, tear them to pieces and devour them. On June 3rd, 1924, I noticed two Gulls apparently waiting an opportunity of seizing one of the many young rabbits feeding on the grass outside the burrows on the hill opposite. They slowly stalked the smaller ones through the bracken, taking no notice of the larger and full grown ones. Presently one seized one by the skin of its back and planing down dropped it on the mud in the centre of the harbour (the tide being out at the time). Many other Gulls hurrying up to join in the feast were driven off by fishermen, and the rabbit, about the size of a full grown rat, was brought to me paralyzed with fright but apparently uninjured. Had the tide been in at the time, the rabbit would have been torn to pieces and swallowed in a few seconds."

GREAT BLACK-BACKED GULL (*Larus marinus*).—Mr. F. S. Graves writes: "This bird is much more numerous in the Peel district than it was twenty to thirty years ago. A few frequent Peel shore and bay at all seasons. Occasionally I meet with them inland on small sheets of water, flooded fields, and a mile or so up the Peel river, in company with Herring-Gulls, but never following a ploughman as other Gulls do. They nested in the Peel district at at least one place in 1924.

"On March 6th, 1925, thirty-one birds of this species were on Peel shore and bay and three more in the harbour. I recognized birds in the first, second and third winters' plumage as well as adults, more of the immature birds than the latter."

RECOVERY OF MARKED BIRDS.

THE expenses of the Ringing Scheme have for the last few years, owing to the large number of birds ringed, been very heavy, and a special appeal for subscriptions has been made to the ringers themselves. It has been suggested that other readers of *BRITISH BIRDS* who are interested in the scheme and yet are unable actually to do any ringing may care to support it by subscribing towards its cost, and any sums sent in for this purpose will be welcome.

Subscriptions have been received from the following ringers since the last list was published :—Capt. C. E. Alford, Messrs. C. F. Archibald, J. Bartholomew, Sir S. Bilsland, Mr. R. O. Blyth, Mrs. C. M. Boord, Messrs. A. W. Boyd, W. G. Bramley, R. H. Brown, P. A. Burt, R. Carlyon-Britton, Miss B. A. Carter, Messrs. P. K. Chance, T. Coward, F. Dipple, R. M. Garnett, H. S. Gladstone, Wm. Glegg, Sir Richard Graham, Bt., Mr. H. S. Greg, Mrs. T. E. Hodgkin, Dr. N. H. Joy, Messrs. T. Kerr, R. E. Knowles, F. H. Lancum, Col. P. C. Macfarlane, Major W. F. Mackenzie, Messrs. J. R. B. Masefield, A. Mayall, Misses I. Mayne and E. Mellish, Mr. J. H. Methold, Dr. H. J. Moon, Messrs. P. E. A. Morshead, J. H. Owen, The Rev. E. Peake, Lt.-Col. Porritt, Mr. B. J. Ringrose, Lord Scone, Mr. P. Scott, Dr. H. G. Langdale Smith, Miss F. K. Staunton, Messrs. W. P. G. Taylor, J. F. Thomas, R. G. Willan and A. H. R. Wilson.

CARRION-CROW (*Corvus c. corone*).—74,799, ringed near Arbroath, Forfarshire, as a young bird, by Mr. H. G. Watson, on May 26th, 1924. Reported on Leuchar's Estate, Fifeshire, on March 30th, 1925, by Mr. G. R. Crocket.

STARLING (*Sturnus v. vulgaris*).—51,850, ringed at Bradfield, near Reading, Berks, by Dr. N. H. Joy, on November 24th, 1922. Reported near where ringed on January 4th, 1925, by Mr. A. L. Whitfeld.

51,927, ringed as 51,850, on November 27th, 1922. Reported where ringed, on November 7th, 1924, by Mr. W. S. Wilson.
55,222, ringed at Maidstone, Kent, as an adult, by Mr. W. Wood, on January 27th, 1923. Reported where ringed, on April 3rd, 1925, by Mr. E. Chittenden.

59,245, ringed at Seaford, Sussex, as a young bird, by Mr. J. F. Thomas, on June 27th, 1923. Reported where ringed, on March 31st, 1925, by Mr. R. Lambert.

CHAFFINCH (*Fringilla c. cœlebs*).—A.3,827, ringed at Bridge-of-Earn, Perthshire, as an adult, by Mr. A. H. R. Wilson, on April 12th, 1923. Reported where ringed, on April 28th, 1924, by the ringer. Again released.

A.5,855, ringed as A.3,827, on July 4th, 1923. Reported where ringed, once March 1924 and twice in March 1925, by the ringer. Again released.

B.2,827, ringed at Malvern, Worcestershire, as an adult, by Mr. P. E. A. Morshead, on December 9th, 1923. Reported where ringed, on February 7th, 1925, by the Rev. O. Jay.

B.4,845, ringed at Pyrford, Surrey, as an adult, by Mr. W. P. G. Taylor, on April 20th, 1924. Reported where ringed, on February 11th, 1925, by the ringer.

CHIFFCHAFF (*Phylloscopus c. collybita*).—A.6,572, ringed at Dorney, Bucks, as a nestling, by Mr. A. Mayall, on May 28th, 1923. Reported at Evora (Alemtejo), Portugal, on October 19th, 1924, by Senhor L. Francisco Sales Batista.

- WILLOW-WARBLE** (*Phylloscopus l. trochilus*).—2,156, ringed at Torrance, near Glasgow, Stirlingshire, as a young bird, by Mr. J. Downie (for Mr. J. Bartholomew), on June 17th, 1921. Reported at Sobral de Pichorro (Fornos de Algodres), Portugal, on October 23rd, 1924, by Mr. E. M. Leith. Published in *A Época*, November 18th, 1924.
- MISTLE-THRUSH** (*Turdus v. viscivorus*).—99,590, ringed at Hafod, Trefnant, Denbighshire, N. Wales, as a young bird, by Major W. M. Congreve, on April 23rd, 1922. Reported two miles from Denbigh Station, on November 29th, 1924, by Mr. R. Williams.
- SONG-THRUSH** (*Turdus ph. clarkei*).—3,292, ringed at Torrance, near Glasgow, Stirlingshire, as a young bird, by Mr. J. Bartholomew, on May 9th, 1922. Reported where ringed, on March 28th, 1925, by the ringer.
- 59,166, ringed at Aberargie, Perthshire, as a young bird, by Mr. A. H. R. Wilson, on May 1st, 1924. Reported at Rock Ferry, Cheshire, on January 19th, 1925, by Mr. W. Gashell.
- BLACKBIRD** (*Turdus m. merula*).—96,331, ringed at Pulborough, Sussex, as a nestling, by Mr. A. Mayall, on April 26th, 1923. Reported where ringed, on February 16th, 1925, by Miss Frogley.
- 59,659, ringed at Pyrford Court, near Woking, Surrey, as a nestling, by Mrs. L. E. Taylor, on May 16th, 1923. Reported one mile from where ringed on March 13th, 1925, by Mr. C. D. van Narman.
- Z.4,621, ringed at Marlborough, Wilts., as a nestling, by Mr. W. P. G. Taylor, on May 11th, 1924. Reported in same place, on February 10th, 1925, by Mr. G. Peirson.
- Z.8,167, ringed near Worthing, Sussex, as a nestling, by Miss F. Collins (for Lon. Nat. Hist. Soc.), on May 26th, 1924. Reported where ringed, on April 9th, 1925, by Mr. G. A. Bentley.
- B.8,330, ringed at Torrance, near Glasgow, Stirlingshire, as an adult, by Mr. J. Bartholomew, on October 20th, 1924. Reported at Blackpool, Lancs, on November 19th, 1924, by Mr. T. Hull.
- 93,264, ringed at Lytham, Lancs, as a young bird, by Dr. H. J. Moon, on March 15th, 1918. Reported near Kirkham, Lancs, on December 8th, 1924, by Mrs. T. Parkinson.
- WHEATEAR** (*Enanthe æ. enanthe*).—C.1,821, ringed near Thornton, Bradford, Yorks, as a young bird, by Mr. J. V. Stephens, on June 27th, 1924. Reported at St. Palais-sur-Mer (Charente Inférieure), France, on September 2nd, 1924, by Mr. J. Schenk. Published in *Chasseur Française*, November 1924.
- REDBREAST** (*Erithacus rubecula*).—A.3,824, ringed at Bridge-of-Earn, Perthshire, as an adult, by Mr. A. H. R. Wilson, on April 6th, 1923. Reported where ringed, on March 14th, 1924. Again released.
- A.3,839, ringed as A.3,824, on April 8th, 1923. Reported where ringed in February, March and December 1924, and February 1925, by the ringer. Again released.
- A.3,843, ringed as A.3,824, on January 14th, 1924. Reported where ringed, on January 26th, 1925, by the ringer. Again released.
- A.3,853, ringed as A.3,824, on January 12th, 1924. Reported where ringed, on December 13th, 1924, by the ringer. Again released.
- A.5,934, ringed as A.3,824, on March 13th, 1924. Reported where ringed, on January 25th, 1925, by the ringer. Again released.
- A.5,931, ringed as A.3,824, on March 15th, 1924. Reported where ringed, in October and December 1924, by the ringer.

- A.5,927, ringed as A.3,824, on March 17th, 1924. Reported where ringed, on March 8th, 1925, by the ringer. Again released.
- A.5,925, ringed as A.3,824, on March 18th, 1924. Reported where ringed, in December 1924, and January and February 1925, by the ringer. Again released.
- A.5,937, ringed as A.3,824, on March 21st, 1924. Reported where ringed, on December 17th, 1924, by the ringer. Again released.
- B.2,590, ringed at Pyrford, Surrey, as an adult, by Mr. W. P. G. Taylor, on April 4th, 1924. Reported where ringed, on March 13th, 1925, by the ringer. Again released.
- B.4,134, ringed at Benacre, Suffolk, as a young bird, by Miss C. Wingfield (for Miss F. K. Staunton), on May 14th, 1924. Reported near where ringed, on November 18th, 1924, by Mr. H. C. Boggis.
- HEDGE-SPARROW** (*Prunella modularis*).—A.3,837, ringed at Bridge-of-Earn, Perthshire, as an adult, by Mr. A. H. R. Wilson, on April 9th, 1923. Reported where ringed, on January 12th, 1925, by the ringer. Again released.
- A.3,852, ringed as A.3,837, on October 25th, 1923. Reported where ringed, on March 18th, 1924, by the ringer. Again released.
- A.3,848, ringed as A.3,837, on November 1st, 1923. Reported where ringed, on April 5th, 1924, by the ringer.
- A.3,850, ringed as A.3,837, on March 5th, 1924. Reported where ringed, on January 21st, 1925, by the ringer. Again released.
- A.5,928, ringed as A.3,837, on March 31st, 1924. Reported where ringed, on February 3rd, 1925, by the ringer. Again released.
- A.5,930, ringed as A.3,837, on April 1st, 1924. Reported where ringed, on March 6th and 9th, 1925, by the ringer. Again released.
- B.9,874, ringed as A.3,837, on October 1st, 1924. Reported where ringed twenty-four times up to March 30th, 1925, by the ringer. Again released.
- B.4,926, ringed at Pyrford, Surrey, as a nestling, by Mrs. L. E. Taylor, on May 25th, 1924. Reported near where ringed, on March 29th, 1925, by Miss E. Armstrong.
- SWALLOW** (*Hirundo r. rustica*).—6,511, ringed at Cheadle, Staffs, as a nestling, by Mr. J. R. B. Masfield, on June 16th, 1922. Reported where ringed on March 7th, 1925, by the ringer. Again released.
- KINGFISHER** (*Alcedo a. ispida*).—B.4,664, ringed at Eton, Bucks, as a nestling, by Mr. A. Mayall, on July 2nd, 1924. Reported at Staines Bridge, Middlesex, on November 7th, 1924, by Miss Rodgers.
- LITTLE OWL** (*Athene n. vidalii*).—73,225, ringed at Staunton Grange, Notts, as an adult, by Miss F. K. Staunton, on May 22nd, 1924. Reported where ringed, on January 22nd, 1925, by Mr. W. F. Player.
- LONG-EARED OWL** (*Asio o. otus*).—39,403, ringed at Kinlune, Kingoldrum, Forfarshire, as a nestling, by Dr. J. N. D. and Mr. T. L. Smith, on May 20th, 1922. Reported at Lintrathen, Kirriemuir, Forfarshire, in October 1924, by Mr. Wm. Fenton.
- MERLIN** (*Falco c. æsalon*).—26,354, ringed at Kenfig, Glamorgan, as a nestling, by Miss C. M. Acland, on June 24th, 1923. Reported about five miles from where ringed, on April 3rd, 1925, by Mr. H. E. David.
- COMMON BUZZARD** (*Buteo b. buteo*).—102,621, ringed at Ullswater, Westmorland, as a young bird, by Dr. H. J. Moon, on June 9th, 1924. Reported at Mansergh, Kirkby Lonsdale, Westmorland, in January 1925, by Mr. L. Ardern.

- SPARROW-HAWK (*Accipiter n. nisus*).—75,105, ringed at Bradfield, near Reading, Berks, as a nestling, by Dr. N. H. Joy, on June 25th, 1924. Reported at Ashampstead, Berks, on December 10th, 1924, by Mr. H. L. Simmons.
75,650, ringed at Barrington, Cambs, as a nestling, by Mr. G. W. Thompson, on July 4th, 1924. Reported near Royston, Herts, on December 4th, 1924, by Mr. D. Edwards.
- HERON (*Ardea c. cinerea*).—102,607, ringed at Ambleside, Westmorland, as a young bird, by Dr. H. J. Moon, in May 1924. Reported near Dunthwaite Hall, Cockermouth, Cumberland, in March 1925, by Mr. S. Brown.
- MALLARD (*Anas p. platyrhynchos*).—34,850, ringed at Stranraer, Wigtownshire, as an adult, by Mr. M. Portal, on February 28th, 1914. Reported in Vanjärvi Pohjanselkä, Sysmä Gut Rajala, Finland, in August 1920 or 1921, by Mr. Toivo Nyberg, per Dr. Ivar Hortling. Published in *Ornis Fennica*, No. 1, 1925, p. 22.
20,501, ringed as 34,850, on March 5th, 1924. Reported at Gie-thoorn (Overijssel), Holland, on October 25th, 1924, by Mr. T. Smit, Jr., and Dr. E. D. Van Oort.
20,506, ringed as 20,501. Reported at Drumoak, Aberdeenshire, in October 1924, by Mr. J. Forbes.
24,797, ringed at Oakmere, Cheshire (hand-reared from eggs of wild Cheshire birds), by Mr. A. W. Boyd, on July 17th, 1924. Reported at Market Drayton, Shropshire, in January 1925, by Mr. J. Norden.
23,655, ringed at Laughton, near Gainsborough, Lincs, as a young bird, by Mr. F. Meynell, on July 3rd, 1924. Reported where ringed, on December 18th, 1924, by Mr. Legard.
- TEAL (*Anas c. crecca*).—71,552, ringed at Netherby, Longtown, Cumberland, by Mr. Wm. Bell (for Sir Richard Graham, Bart.), on March 31st, 1923. Reported at Tavelsjö, about 35 kilometres N.W. of Umeå, N. Sweden, on September 1st, 1924, by Prof. E. Lönnberg.
71,556, ringed as 71,552. Reported on the Island of Fanö, near Esbjerg, Denmark, on October 21st or 22nd, 1924, by Mr. P. Jespersen.
71,565, ringed as 71,552. Reported at Wardley Wood, Worsley, near Manchester, on September 9th, 1924, by Capt. R. M. Nuttall. These birds were hand-reared from eggs of wild birds in 1922 and feathers of one wing were cut. On March 31st, 1923, the cut wing-feathers were pulled and the birds liberated.
- CORMORANT (*Phalacrocorax c. carbo*).—101,829, ringed at Castle Loch, Mochrum, Wigtownshire, as a nestling, by Mr. J. G. Gordon, on June 14th, 1919. Reported at Loch Cullen, co. Mayo, Ireland, on February 18th, 1925, by Mr. W. B. Threlfall.
- SHAG (*Phalacrocorax a. aristotelis*).—102,879, ringed at Melledgan, Scilly Islands, Cornwall, as a nestling, by Mr. A. W. Boyd, on June 25th, 1924. Reported at Great Porth, Bryher, Scilly Islands, on February 7th, 1925, by Miss I. Stedeford.
- GANNET (*Sula bassana*).—103,607, ringed at Ailsa Craig, Ayrshire, as a young bird, by Mr. D. Macdonald, on July 19th, 1924. Reported at Irvine, Ayrshire, on October 8th, 1924, by Mr. H. McFedries.
103,523, ringed as 103,607. Reported at Portarogie, co. Down, Ireland, on September 28th, 1924, by Mr. S. Adair.
103,585, ringed as 103,607. Reported near Lamlash, Isle of Arran, Scotland, on October 2nd, 1924, by Mr. R. A. Little.
103,650, ringed as 103,607, on July 22nd, 1924. Reported near

Santoña (Santander), Spain, on October 18th, 1924, by Sr. Hijos de Carlos Albo.

103,850, ringed as 103,607, on July 28th, 1924. Reported at Helensburgh, Dumbartonshire, early in October 1924, by the ringer. This bird now on Queen's Park Duck Pond, Glasgow.

103,922, ringed as 103,607, on July 30th, 1924. Reported at Bangor, co. Down, Ireland, on September 27th, 1924, by Mr. F. McDowell.

WOOD-PIGEON (*Columba p. palumbus*).—20,820, ringed at Torrance, near Glasgow, Stirlingshire, as a young bird, by Mr. J. Bartholomew, on April 22nd, 1924. Reported at New Monkland, Lanarkshire, on September 11th, 1924, by Mr. A. Porter.

74,515, ringed on Scone Estate, Perth, as a nestling, by Lord Scone, on May 12th, 1924. Reported five miles north of Perth, on April 17th, 1925, by Mr. John Cameron.

76,043, ringed at Haslingfield, Cambs, as a young bird, by Mr. G. W. Thompson, on September 10th, 1924. Reported near where ringed on November 15th, 1924, by Mr. C. Cox.

STONE-CURLEW (*Burhinus æ. ædicnemus*).—Ringed at Cholsey, Berks, as a young bird, by Mr. J. F. Madden, on June 9th, 1923. Reported near Soustons (Landes), France, on October 23rd, 1924, by Mons. S. Gratiannette.

OYSTER-CATCHER (*Hæmatopus o. ostralegus*).—24,065, ringed on Rockcliffe Marsh, Cumberland, as a nestling, by Mr. R. H. Brown, on July 3rd, 1924. Reported at Humphrey Head, Morecambe Bay, Lancs, on December 2nd, 1924, by Mr. W. Burrow.

24,068, ringed at Kirkbride Marsh, Cumberland, as a nestling, by Mr. R. H. Brown, on July 10th, 1924. Reported on shore of Solway Firth, Dumfriesshire, on January 3rd, 1925, by Mr. Wm. McAndrew.

21,318, ringed at Loch Leven, Kinross, as a young bird, by Mr. W. Telfer (for Mr. A. H. R. Wilson), on June 24th, 1924. Reported near Fleetwood, Lancs, on February 7th, 1925, by Mr. W. Curwen.

LAPWING (*Vanellus vanellus*).—28,228, ringed at Aldermaston, Berks, as a nestling, by Dr. N. H. Joy, on June 2nd, 1913. Reported near where ringed, on December 31st, 1924, by Mr. E. Blatch.

53,331, ringed at Torrance, near Glasgow, Stirlingshire, as a young bird, by Mr. J. Bartholomew, on May 24th, 1922. Reported at Kilkee, co. Clare, Ireland, late in January 1925, by Mr. J. Hastings.

58,928, ringed as 53,331, on June 11th, 1923. Reported at Armagh Head, co. Mayo, Ireland, on December 29th, 1924, by Mr. M. Gilbry.

58,930, ringed as 53,331, on June 12th, 1923. Reported at Swinford, co. Mayo, Ireland, on December 31st, 1924, by Mr. P. Cryan.

Y.2,183, ringed as 53,331, on June 22nd, 1924. Reported at Baillieston, near Glasgow, early in March 1925, by Mr. G. Slorance, Jnr.

20,360, ringed at Ullswater, Westmorland, as a young bird, by Dr. H. J. Moon, on May 17th, 1924. Reported at Penrith, Cumberland, on December 19th, 1924, by Mr. A. N. Hodgson.

Z.1,265, ringed at Gartmore, Stirlingshire, as a young bird, by Col. P. C. Macfarlane, on June 19th, 1924. Reported at Ennis, co. Clare, Ireland, on February 17th, 1925, by Mr. E. White.

REDSHANK (*Tringa t. totanus*).—Z.8,047, ringed at Rusland, Ulverston, Lancs, as a nestling, by Mr. C. F. Archibald, on June 8th, 1924. Reported at Cockersand Abbey, about ten miles away, on November 27th, 1924, by Mr. H. S. Greg.

- CURLEW** (*Numenius a. arquata*).—75,011, ringed near Dalston, Cumberland, as a nestling, by Mr. R. H. Brown, on June 3rd, 1924. Reported at Stranraer, Wigtownshire, on January 12th, 1925, by Mr. J. Law.
71,514, ringed at Kinclune, Kingoldrum, Forfarshire, as a young bird, by Dr. J. N. D. and Mr. T. L. Smith, on June 18th, 1924. Reported at Ballyhaunis, co. Mayo, Ireland, on October 27th, 1924, by Mr. G. S. Salmon.
21,704, ringed at Callendar, Perthshire, as a young bird, by Col. P. C. Macfarlane, on July 4th, 1924. Reported at Lixnaw, co. Kerry, Ireland, on October 9th, 1924, by Mr. A. Parkinson.
- WOODCOCK** (*Scolopax r. rusticola*).—Z.3086, ringed at Breast, Holker, Cark-in-Cartmel, Lancs, as a young bird, by Col. A. Porritt's keeper, on May 21st, 1924. Reported where ringed on January 28th, 1925, by Mr. H. B. Turney.
Z.3,531, Z.3,537, ringed at Dunsop Bridge, Clitheroe, Lancs, one young and one adult bird (caught off nest sitting), by Mr. A. C. Stephenson (for Mr. B. J. Ringrose), on July 8th, 1924. Reported near Slaidburn, Yorks, and near Ashburton, S. Devon, on October 22nd, 1924, and January 23rd, 1925, by Col. H. L. Darlington and Major Cooke-Hurle.
- COMMON TERN** (*Sterna h. hirundo*).—L.M.24, ringed at Walney Island, N. Lancashire, as a young bird, by Mr. H. W. Robinson, on August 7th, 1924. Reported near Aiguillon-sur-Mer (Vendée), France, early in October 1924, by Mons. E. Seguin-Jard.
- COMMON GULL** (*Larus c. canus*).—75,505, ringed at Ardnamurchan, Argyllshire, as a young bird, by Mr. T. Kerr, on July 7th, 1924. Reported (found injured) at Tayinloan, Argyllshire, in December 1924, by Mr. E. M. Macalister Hall.
71,397, *correction*. Reported Vol. XVII., p. 242, as ringed on Handa Island, should have been near Lochinver, Sutherland.
- HERRING-GULL** (*Larus a. argentatus*).—23,509, ringed at Prail Castle, Auchmithie, Forfarshire, as a young bird, by Mr. H. G. Watson, on June 30th, 1924. Reported on the Humber foreshore, on December 20th, 1924, by Mr. S. J. Rowland.
- LESSER BLACK-BACKED GULL** (*Larus f. affinis*).—21,182, ringed at Annet, Scilly Isles, Cornwall, as a young bird, by Mr. H. W. Robinson, on June 21st, 1923. Reported at Caparica, near Lisbon, Portugal, on September 28th, 1924, by Senhor Joas Goncalves Bexiga, per Mr. H. E. O. Gilbert.
24,582, ringed at Foulshaw, Westmorland, as a young bird, by Mr. H. W. Robinson, on August 9th, 1924. Reported at mouth of Douro River, Foz do Douro, near Oporto, Portugal, on November 11th, 1924, by Senhor Augusto Victor Campos, per Mr. H. Westenfeld.
24,405, ringed as 24,582. Reported at Terreiro do Paco, Lisbon, Portugal, late in February 1925, by Mr. H. E. O. Gilbert.
22,466, ringed at Annet, Scilly Islands, Cornwall, as a nestling, on July 1st, 1924, by Mr. A. W. Boyd. Reported at Lagos (Algarve), Portugal, on October 26th, 1924, by Senhor José d'Arbreu Pimenta. Reported in *A Aurora do Lima*, December 5th, 1924.
- KITTIWAKE GULL** (*Rissa t. tridactyla*).—67,423, ringed on Farne Islands, Northumberland, as a young bird, by Mr. A. C. Greg, on June 28th, 1923. Reported at Horse Island, district of St. Barbe, Newfoundland, on August 12th, 1924, by Mr. L. Curtis, per *St. John's Daily News*.

RAZORBILL (*Alca torda*).—25,068, ringed at Ailsa Craig, Ayrshire, as a young bird, by Mr. D. Macdonald, on July 26th, 1924. Reported near Tarbert, Loch Fyne, Argyllshire, early in November 1924, by Mr. J. McDougall.

GUILLEMOT (*Uria a. albionis*).—24,931, ringed at Ailsa Craig, Ayrshire, as a young bird, by Mr. D. Macdonald, on July 23rd, 1924. Reported at Loch Fyne, Argyllshire, early in January 1925, by Mr. D. Macfarlane.

25,200, ringed as 24,931, on July 27th, 1924. Reported at co. Wexford, Ireland, on October 23rd, 1924, by Mr. P. Carey.

25,300, ringed as 24,931, on July 29th, 1924. Reported at Loch Fyne, Argyllshire, early in November 1924, by Mr. D. Leitch.

MOOR-HEN (*Gallinula ch. chloropus*).—73,283, ringed at Rhifail, Sutherland, as a young bird, by Mr. A. H. R. Wilson, on June 18th, 1924. Reported at The Hatchery, Kinbrace, about 25 miles S.E. of where ringed, on October 20th, 1924, by Mr. J. G. McNicol.

MARKED ABROAD AND RECOVERED IN GREAT BRITAIN.

STARLING (*Sturnus v. vulgaris*).—P. Skovgaard, Viborg, Denmark, two birds ringed at Mölskovgaard, North Denmark, on June 1st, 1920. One reported at Saltburn, near Middlesburgh, Yorks, on January 8th, 1921, by Mr. G. Hart, and the other at Walney Isle, Lancs, on April 29th, 1922, by Mr. J. Clark. (See *Danske Fugle*, 1925, pp. 22 and 23.)

P. Skovgaard, Viborg, Denmark, ringed at Vindt Mölle, Viborg, Denmark, on May 29th, 1922. Reported at Alves, Forres, Morayshire, on March 6th, 1924, by Dr. A. L. Thomson. (See *Danske Fugle*, 1925, p. 23.)

WIGEON (*Anas penelope*).—Museum, Leiden, 13,853, ringed as a mature bird, at Oost-Kapelle, Province Zeeland, Holland, between 20th and 30th March, 1923. Reported near Thurles, co. Tipperary, Ireland, in January 1925, by Mr. W. S. Williams.

BLACK-HEADED GULL (*Larus r. ridibundus*).—Museum, Goteborg, Sweden, C.2,461, ringed as a young bird, at south point of Öland in the Baltic, on June 23rd, 1924. Reported at King's Lynn, Norfolk, on February 28th, 1925, by Dr. S. H. Long.

COMMON GULL (*Larus c. canus*).—Estonia, Tartu, Orn. 199, ringed on Island of Filsand, N.W. coast of Oesel, Baltic, as a young bird, early July 1922. Reported at Haslingden Grane, near Haslingden, Lancs, on November 23rd, 1923, by Mr. O. Hartley, per Mr. A. W. Boyd.

NOTES

NOTES FROM HOLY ISLAND, NORTHUMBERLAND,
1924.

YELLOW WAGTAIL (*Motacilla flava rayi*).—Several between April 24th and May 15th.

WHITE WAGTAIL (*M. a. alba*).—A few passed through between April 24th and May 13th, while a single bird appeared on September 18th.

CONTINENTAL GOLDEN-CRESTED WREN (*Regulus r. regulus*).—Many, presumably of this race, appeared throughout April and one in May.

FIRE-CRESTED WREN (*R. i. ignicapillus*).—A single bird on May 25th.

RED-BACKED SHRIKE (*Lanius c. collurio*).—An immature female on September 19th.

PIED FLYCATCHER (*Muscicapa h. hypoleuca*).—Several between May 4th and 20th, and, again, from September 6th to October 5th, but in smaller numbers.

RED-BREASTED FLYCATCHER (*M. p. parva*).—Single birds on October 8th and 16th—both were males.

EVERSMANN'S WARBLER (*Phylloscopus b. borealis*).—A male on September 27th.

BARRED WARBLER (*Sylvia n. nisoria*).—On September 27th a large Warbler with a long tail and noticeably pale back was beaten out of the hedges several times, but could not be obtained owing to its skulking habits. Dr. Eagle Clarke, who was with me at the time, considered it to belong to this species.

NORWEGIAN BLUETHROAT (*Luscinia svecica gaetkei*).—Dr. Eagle Clarke saw a male on May 9th.

HOOPOE (*Upupa e. epops*).—A single bird on May 8th.

MANX SHEARWATER (*Puffinus p. puffinus*).—A few in May and one in September.

FULMAR PETREL (*Fulmarus g. glacialis*).—One in February and many throughout May and June.

TURTLE-DOVE (*Streptopelia t. turtur*).—One on May 27th.

NORTHERN GOLDEN PLOVER (*Charadrius apricarius albi-frons*).—A large flock on April 18th and 19th.

LITTLE GULL (*Larus minutus*).—A single bird on May 17th.

GREAT SKUA (*Stercorarius s. skua*).—One on January 30th and two on November 7th.

BLACK GUILLEMOT (*Uria g. grylle*).—These birds are by no means uncommon from August to May in each year and must certainly have been overlooked in the past.

LITTLE AUK (*Alle alle*).—Several appeared on January 11th.

Again, I must express my thanks to Dr. W. Eagle Clarke for his kindness in identifying such specimens as were obtained, and much valuable help and instruction in the field.

W. G. WATSON.

EARLY NESTING OF MAGPIE IN CAMBRIDGESHIRE.

ALL the Magpies (*Pica p. pica*) round Barton, Cambridgeshire, have been noticeably earlier in nesting this year, but one pair that I had under observation were remarkably so. They began building between February 22nd and 25th, 1925, and the exterior of the nest was apparently complete about March 6th–8th. On April 8th I went up the tree and took the clutch of eight eggs, which proved to have been sat on for four or even five days. This places the date of first sitting at April 4th and the laying of the first egg at about March 28th.

G. W. THOMPSON.

THE CONTINENTAL GOLDFINCH AS A BRITISH BIRD.

THE *Practical Handbook* records under this species: "Immigrant Goldfinches are recorded regularly from the east coast of England at the end of September and early November. Until actual specimens have been examined, however, the Continental form cannot be definitely included."

Some time ago I happened to get into conversation with A. B. Thompson of H.M.S. "Repulse." He told me that on November 1st, 1923, he opened the door of an unused boiler and out flew a Rook, and it immediately hid itself in the coal! He went up on deck and found it "swarming with birds."

The following is the list of birds he remembered seeing:—Rook, Hooded-Crow, Starling, Greenfinch, Goldfinch, Linnet, Skylark, Thrush, Blackbird, Robin, Tit, Wren.

I got into communication with Rev. J. W. Evans and Lieut.-Commander C. E. Morgan, R.N., and the latter kindly gave me the following information. He remembered seeing the birds mentioned in the list, except the Tit and Wren, and added Sparrow, Jackdaw and Hawk. They all came on board about 60 or 70 miles from shore between the Tyne and Flamborough Head, so that the Goldfinches were evidently on their way to England. This fits in with the report on East Coast migration (*Brit. Birds*, Vol. XVII., p. 262).

The Rooks came on board at about 3 p.m., the smaller birds all that evening up till about 10 p.m. The Rooks mostly roosted on the main-mast, and most of them left at 1 a.m. The small birds were all over the ship, and many were still about at 8 a.m. The wind on the 1st was easterly and very

light. "The Rooks flew alongside the ship for a long time before they came on board, and were flying at the rate of about 17 to 18 miles per hour."

NORMAN H. JOY.

MEALY REDPOLL AT HAMPSTEAD.

ANSWERING an unexpected call on Hampstead Heath on March 29th, 1925, I found and watched a Mealy Redpoll (*Carduelis l. linaria*) feeding on the seeds of some small alders surrounded by noisy children, dogs, etc. The bird—a very grey one—was doubtless a member of a passing flock, though I saw no others. I was able to watch the bird for a quarter of an hour at a distance of a few yards in a good light.

The latest record for this locality that I have been able to trace is as far back as 1866, in which year Mr. J. E. Harting saw "a few on the Heath" (H. Goodchild, citing Harting, in the Hampstead Scientific Society's *Hampstead Heath*, 1913).

BERTRAM LLOYD.

WATER-PIPIT IN DORSET.

ON April 4th, 1925, I saw a Pipit on Lodmoor near Weymouth, which I thought was a Water-Pipit (*Anthus s. spinoletta*), but I did not get a very close view. The wind was at the time cold and strong from S.S.E. and had been easterly for some days. On April 6th I saw the bird in the same place, and with strong glasses at close range clearly made out that it was a Water-Pipit in, I think, the summer plumage. In the field the bird has a grey appearance and looks much lighter than the Rock-Pipit, the unmarked pale buffish breast and broad white eye-stripe being very conspicuous. This, so far as I know, is the first record of the occurrence of this species in Dorset.

F. L. BLATHWAYT.

RAPID NEST-BUILDING BY SONG-THRUSH.

I DO NOT know if there are any notes on the length of time taken to build their nests by Song-Thrushes (*Turdus ph. clarkii*), but I watched one building near Diss, Suffolk, recently. She started about 12 noon on April 16th, and the nest was complete and fully "mudded" by noon on the 17th. I did not see the birds near the nest again until the morning of the 20th, when the first egg was laid.

J. H. METHOLD.

INFLUENCE OF RAINFALL ON FECUNDITY OF SONG-THRUSH AND BLACKBIRD IN PERTHSHIRE.

DURING 1924, for the purpose of ringing birds, I kept a list of all nests discovered, where they were, and the number of eggs in them.

On looking over this list I was struck with the tremendous difference in the size of clutches before and after the heavy rainfall in the first week of May. I deal with two species only, as giving enough data to work out an average, *i.e.* the Song-Thrush (*Turdus ph. clarkii*) and the Blackbird (*Turdus merula*).

I am forced to treat the two species as one because in a few cases my notes are not absolutely clear as to species (between the two), having not been kept with a view to this note.

I must add that the clutches in every case dealt with were ascertained to be complete and incubation begun, because I did not wish to pay unnecessary visits to any nest for ringing purposes.

The first four months of 1924 were dry, and May, June and July showed a good rainfall. The rain came during the first week of May, but its effect was not shown in fecundity till the middle of the month and I take the 14th of May as the division of periods.

During April and the first half of May 42 nests contained an average of 3.42 eggs, while from May 15th to the month of August 56 nests contained an average of 4.32 eggs. I add the weekly rainfall as far as it applies.

January 46 points; February 86 points.

Week ending	March	1st	...	7 points
"	"	8th	...	nil
"	"	15th	...	nil
"	"	22nd	...	33 "
"	"	29th	...	14 "
"	April	5th	...	4 "
"	"	12th	...	53 "
"	"	19th	...	6 "
"	"	26th	...	71 "
"	May	3rd	...	19 "
"	"	10th	...	100 "
"	"	17th	...	40 "
"	"	24th	...	221 "
"	"	31st	...	40 "
"	June	7th	...	119 "
"	"	14th	...	75 "
"	"	21st	...	76 "

and 3 inches during the next 3 weeks. It will be noted how dry the weather was for 8 weeks prior to April 20th, 1924, and also the splendid rain about May 10th.

This year, 1925, I have so far noted 14 nests with complete clutches averaging 3.8 eggs.

A. H. R. WILSON.

BLACKBIRD BROODING ON NEST AND EGGS OF SONG-THRUSH.

IN a plantation in a garden at Cople, in Bedfordshire, I found on April 10th, 1925, a Blackbird (*Turdus m. merula*) sitting on a nest some five feet from the ground, in the fork of a small, ivy-clad elm sapling. To test the close brooding of the sitting bird I gradually approached and she allowed me to remain for some time within a foot of the nest. Eventually she vacated her charge. Looking into the nest I was surprised to find it was that of a Song-Thrush (*T. ph. clarkei*) as also the three typical eggs it contained. I followed up the observation on the day following and tried not to disturb the sitting bird further, but she again left the nest. The following day, however, she had evidently deserted and the eggs were cold. There was a nest of a Blackbird some fifty yards distant, which a short time previously, I understand, had been robbed of the eggs by mice, but I have no proof that this was one and the same bird.

This is the first instance I have personally known of one bird deliberately brooding another's nest and eggs. J. S. ELLIOTT.

CURIOUS NESTING-SITE OF REDBREAST.

ON April 21st, 1925, I was shown the nest of a Redbreast (*Erithacus r. melophilus*) built in rather interesting circumstances, and although the versatility of this species in the matter of nesting-sites is so well known I think that the instance is worth recording.

The nest was built inside the dressing-room of the Wilmington (Kent) Football Club, and although the hut is filled with noisy players for some time every Saturday and occasionally during the week the hen is quite unperturbed and shows no sign of forsaking her six eggs.

Although a certain amount of support is afforded by a narrow ledge, the stability of the nest depends mainly upon a coat hook, around which the birds have accumulated an extraordinary amount of material, chiefly moss and hay. The adjacent coat hooks are all in use during matches, but as this particular team is in the running for their league championship and the nest is regarded as a sort of mascot, the nest itself is not likely to be interfered with! The birds have ingress and egress through a small hole near the roof of the hut.

F. HOWARD LANCUM.

HOMING INSTINCT IN HEDGE-SPARROW.

WHILE trapping birds in Perthshire for ringing purposes I noticed a Hedge-Sparrow (*Prunella m. occidentalis*) begin to

frequent the trap five or six times a day. It seemed a good opportunity to find out its homing powers, so on April 7th, 1925, I took it and released it in a dense wood half a mile from home. It was back in the trap two hours later.

On the 8th it returned $1\frac{1}{4}$ miles in $2\frac{1}{2}$ hours, on the 10th $3\frac{1}{2}$ miles in $2\frac{1}{4}$ hours, and on the 14th I released it 2 miles away and arranged a line of watchers to discover how soon it reached home. The bird settled for nearly 9 minutes, then went straight back, only stopping twice, and covered the distance in 12 minutes. . A. H. R. WILSON.

BUILDING HABITS OF THE DIPPER.

FROM March 19th to April 1st, 1925, I had under observation a pair of Dippers (*Cinclus c. gularis*) who were then building on a stone bridge near Strathpeffer, Ross-shire. When collecting moss off the stones, both birds repeatedly dipped the moss in the river, swimming with it in their bills until it was saturated, before conveying it to the nest. Grasses were inserted dry.

The birds were also most particular about working alternately on the nest. Each appeared to recognize at a glance the work of the other. Thus, if one arrived at the nest with material it only inserted it in the nest if the other had inserted the previous bit. If it arrived before this had happened it waited for its mate to insert its material before inserting its own. The birds were under observation for some hours daily and I never saw the same one insert material twice running, but frequently saw each waiting its turn.

PATIENCE MACKENZIE.

LITTLE OWLS ATTACKING CAT.

FOR the last six months I have had a pair of Little Owls (*Athene n. vidalii*) under close observation. They live in a field adjoining my house at Ringwood, Hants.

On March 26th, hearing them making a very loud noise, I looked with my glasses and saw that they were attacking my cat, sweeping down at her again and again; after crouching down for a moment she ran towards the house across the open field, and they attacked her all the way.

About five-thirty the next morning I was wakened by the same loud chattering and saw that the cat was sitting almost out of the window on the sill, the Owls were flying right in her face as if trying to knock her off the sill (the room is on the upper floor of a low thatched cottage and I often hear them about the thatch at night). The cat came back farther

into the room but did not leave the window-sill, and for some moments they continued to swoop at her. In the evening my husband and I heard them, and they were attacking her again, and she ran under a chicken house for shelter. She is a big cat and a good hunter but I think she is leaving their piece of bank alone to-day.

E. G. NASH.

INCREASE OF LITTLE OWL IN NORTH LANCASHIRE.

WITH reference to the note (Vol. XVIII., p. 267) on "More Little Owls in North Lancashire," these birds are undoubtedly spreading rapidly northwards. As far back as 1921 a pair nested within 200 yards of my house at Flixton in a cavity in an old oak and on April 29th I found five eggs, which I have in my collection. On May 16th I found a second clutch of four eggs, in the same hole, and these were hatched and reared. The oak was cut down the following autumn and I have not seen the birds in the vicinity since.

In early June, 1923, I saw a Little Owl in the Ribble Valley, near Clitheroe, perched on a fence near the river. As I approached it I disturbed a brood of Moorhens (*Gallinula chloropus*) which began to swim towards the other bank. The Little Owl dashed over them and picking one of the chicks from the water with its claw, rapidly disappeared into an adjoining wood.

WM. E. BARBER.

RARE BIRDS IN ROMNEY MARSH.

I HAD a remarkable walk in Romney Marsh, Kent, on April 6th, 1925, and some of the birds seen seem to deserve a record. A steady, though not strong, wind had been blowing from between south and south-east for nearly two days, and there had been rain on and off all the previous night. It is possible that this was the cause of the arrival of some unusual visitors.

Near Appledore I saw a flight of eight Grey Geese come down on to the marsh about 9 a.m.; I think they had risen just before I saw them, but it is possible that they were just coming in from a long flight. At any rate, they allowed an unusually close approach before again taking wing. As I walked towards them they took to the water, and so were partly hidden by a bank, but although it was raining I had a good view of their beaks, and could see that all had rather stout, uniformly pinkish-orange beaks. The general plumage was decidedly pale, suggesting Pink-footed rather than Bean, and at the time I thought from my recollection that the colour of the beak was right for the former species too. When the birds got up I particularly noticed the pale, almost white,

front edge of the wing. They soon settled again. It seems quite clear from the size and colour of the beak and colour of the wing that they must have been Grey Lag-Geese (*Anser anser*), although the colour of the beak looked to me lighter than it is depicted on the plate in the *Practical Handbook*. When Dr. N. F. Ticehurst wrote his *History of the Birds of Kent* he was unable to discover very clear records of the occurrence of the Grey Lag-Goose in Kent. From time to time during the past fifteen years, when I have visited Romney Marsh in winter, I have seen Grey Geese at sufficiently close quarters to identify them; Pink-footed (*A. brachyrhynchus*) and Bean (*A. fabalis*) I have identified more than once; White-fronted (*A. albifrons*) once; and I have seen large flocks migrating past Dungeness point, too far off to identify. This is my first identification of the Grey Lag.

A couple of hours later, after the weather had turned fine, I put up a Heron that looked unusually dull on the wings as it flew. It very kindly settled again not far from a Common Heron (*Ardea cinerea*), and on settling the contrast in the colour of the two birds was very marked. At a distance, with the naked eye, the one looked almost black, the other pale grey. Through binoculars the dark bird also looked a good deal smaller, its neck and sides looked very dark, the beak was a much duller colour (but this, I think, is the case with first-year Herons), and it squatted in a curious attitude with its body sloping steeply forward, and the neck at first drawn straight up, and then gradually depressed. I have seen the Purple Heron (*A. purpurea*) in Central Italy, twelve years ago, but not in company with the grey species. However, I think there can be no doubt that it was a Purple Heron. While I was watching it my first Swallow for the season flew into the field of my glasses! Half a mile further on I saw what must, I think, have been a second Purple Heron (not the same again); this was also near one or two Grey Herons, one of them an exceptionally beautiful bird, in perfect pearl-grey plumage. In this case I did not think the Purple Heron looked appreciably smaller, but it was further off; its plumage and general appearance seemed just the same, and it adopted the same rather curious attitude when it settled. Ticehurst records five occurrences of the Purple Heron in Kent, four of them from Romney Marsh (*B. of Kent*, pp. 309-10).

I also saw two curious Sandpipers, whose identity must, I am afraid, remain a little uncertain, though I watched them for a good time at a distance of perhaps thirty yards. They were slender and elegant birds, smaller, I think, than Red-

shanks, though no Redshank happened to go near them ; a party of Ringed Plovers, however, did. Their beaks were long, straight and dark, and their legs apparently the same. Certainly neither was red. Their necks and under-parts were beautifully white, with no trace of a brown patch on the sides. The wings looked a fairly uniform brown, not very dark. I had my glasses on them at the moment when they flew up ; they showed a white patch on the back, rather similar to a Redshank's, but not very conspicuous. They were silent. They settled again some way off, and I could not get any nearer to them. I think it possible that they were Marsh-Sandpipers (*Tringa stagnatilis*) in winter plumage ; but the inconspicuousness of the white on the back casts a doubt on this. It is possible that the white would have seemed more conspicuous to the naked eye than it did through binoculars, but there are so many members of the genus *Tringa* in the world, any of which might turn up in England, that I cannot be sure.

It may be worth adding that I saw a good sized passing flock of Ruffs (*Philomachus pugnax*), as well as a single bird feeding among some Redshanks. And I have never seen such quantities of Ducks on the marsh in one day. Shoveller (*Spatula clypeata*) and Pintail (*Anas acuta*) were specially numerous—most of them, no doubt, birds of passage.

H. G. ALEXANDER.

POSSIBLE WHITE-BILLED DIVER IN MERIONETH.

My friend, Mr. G. M. Furley, a good ornithologist, has described to me a bird which he watched on January 14th, 1925, off the coast of Harlech. It was "a large Diver, almost as big as a Cormorant," with which he was able to compare it. The bill was distinctly white, and had a slight up-tilt at the end, while the upper plumage was very dark—nearly black in fact. Was this possibly a White-billed Northern Diver (*Colymbus adamsii*) ? The details certainly seem to point to that species. It has not previously been recorded in Wales, nor, indeed (according to the *Practical Handbook*), anywhere in the west.

H. E. FORREST.

GREAT BLACK-HEADED GULL IN HAMPSHIRE.

At the request of Dr. F. G. Penrose I am sending you note of the fact that at the latter end of November and beginning of December, 1924, there was a single specimen of the Great Black-headed Gull (*Larus ichthyaetus*) in Poole Bay—it mainly confined itself to the western side of Bournemouth Pier between

that and Durley Chine; it was fairly tame. I had many opportunities of being within fifty yards of it and it noticeably kept to itself; it did not mix with the other Gulls, nor would it come to be fed as the others on the beach will do. I tried it with bread but it would not touch it, and the only food I saw it take was self-caught fish. I saw it catch sprats on several occasions.

W. PARKINSON CURTIS.

GLAUCOUS GULL IN KENT.

ON March 28th, 1925, I found a dead Glaucous Gull (*Larus hyperboreus*) near Brookland, Romney Marsh. Since this species is so rare on the south coast, only some six or seven examples being mentioned in *The Birds of Kent*, the occurrence seems worth recording. The bird had apparently been shot and was beyond preservation, but measurements were made and some of the primaries and also some of the body feathers were taken. It was an immature bird, apparently in its second winter, the plumage being very pale and the outer primaries almost pure white. Dr. N. F. Ticehurst kindly confirmed the identification.

W. H. THORPE.

GLAUCOUS GULL IN MAN.

A GLAUCOUS Gull (*Larus hyperboreus*) that had been frequenting Peel shore and harbour (in company with Herring and Great Black-backed Gulls since the 19th) came into my possession on January 22nd, 1925, immediately after being shot. I made the following note before despatching it to the Museum in Douglas: "It was a large handsome bird in, I think, its second winter's plumage."

FRANK S. GRAVES.

INTERVAL BETWEEN NESTS OF MISTLE-THRUSH.—Mr. R. H. Brown writes that a clutch of eggs of *Turdus v. viscivorus*, twelve days incubated, was destroyed by a cat on April 21st, 1925. A second nest was begun the same day and the clutch of eggs was complete on the 28th. Interval seven days.

EARLY NESTING OF BLACKBIRD IN BERKSHIRE.—Major B. Van de Weyer informs us that some young Blackbirds (*Turdus m. merula*) left a nest in Eddington Churchyard on January 10th, 1925.

BLACK REDSTART IN INNER HEBRIDES.—A specimen of *Phœnicurus o. gibraltariensis* was caught by Mr. R. Leslie (*Scot. Nat.*, 1924, p. 184) in an exhausted condition on October 28th, 1924, at the Skerryvore Lighthouse (28 miles west of Mull). The bird is very rarely recorded from west Scotland.

CUCKOO RETURNING TO SAME SUMMER QUARTERS FOR SEVEN SUCCESSIVE YEARS.—Major B. Van de Weyer writes that the Cuckoo (*Cuculus c. canorus*) with the peculiar broken note (Vol. XVI., p. 107, XVIII., p. 30) returned to its summer quarters in Hungerford Park, Berks, for the seventh year on April 21st, 1925.

FOOD OF MANX SHEARWATER.—Mr. J. L. Auden, writing on Skomer Island (Pembrokeshire) in the *Field* (30th October, 1924, p. 678), states that numerous Manx Shearwaters (*Puffinus p. puffinus*) which he handled almost invariably regurgitated the remains of beetles, "very like the cast of the Little Owl."

FULMAR PETRELS AND GANNETS ON THE YORKSHIRE CLIFFS.—In 1924, Fulmars (*Fulmarus g. glacialis*) nested in the cliffs south and north of Scarborough, but although they visited the Whitby cliffs they did not breed there (*Nat.*, 1925, p. 23). A pair of Gannets (*Sula bassana*) frequented the Bempton Cliffs during the summer of 1924 and it is hoped that they may return and breed next year (*t.c.*, p. 26).

GREENSHANK BREEDING IN ABERDEENSHIRE.—Mr. Seton Gordon notes (*Scot. Nat.*, 1924, p. 126) that he found a *Tringa nebularia* breeding in Aberdeenshire in 1924.

SANDWICH TERN BREEDING IN CLYDE ESTUARY.—Mr. J. P. Ritchie states (*Scot. Nat.*, 1924, p. 136) that he found one nest in 1923 and four in 1924 of *Sterna sandvicensis* in the Clyde Estuary, where the bird has not been reported as breeding for the last ten years.

LATE NESTING OF MOORHEN IN DURHAM.—Mr. R. H. Brown informs us that his brother observed a brood of young *Gallinula ch. chloropus* still in down on October 29th, 1924, on a pond near the city of Durham.

LETTER.

HOODED CROWS IN THE LONDON DISTRICT.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to Captain Stoneham's note on the Hooded Crow (*Corvus cornix*) observed on Wimbledon Common (Vol. XVIII., p. 302), I should hardly have thought this a very singular occurrence. In the wintertime I repeatedly observe Hooded Crows at low tide on the flats of the Thames by Chelsea reach.

A much more uncommon bird in the London district is the Grey Wagtail (*Motacilla c. cinerea*) which I have seen from time to time, and should be interested to hear if other readers of *British Birds* have ever noticed it.

April 6th, 1925.

CLIFFORD BORRER.



REVIEWS



The Food of some British Wild Birds : a Study in Economic Ornithology.

By Walter E. Collinge, D.Sc., M.Sc., etc. 2nd revised edition.

Published by the author. Parts I.-III. 6s. 3d. per part.

THE first edition of this work was published in 1913. The main differences in this edition are that it treats of the food of seventy species and over ten thousand individual examinations as against twenty-nine species and some three thousand three hundred and fifty examinations, and that the work done since 1913 has been by the volumetric instead of the numerical method. The volumetric method by which the various food contents of the bird are measured and can be compared in percentages is certainly more valuable economically than the numerical method by which the various contents are counted.

No one who studies this book will dispute the great importance of the subject, and although Dr. Collinge is to be sincerely congratulated on the valuable work he has done, it is obvious that periodical state-aided enquiries on a much larger scale than are possible for one man are highly necessary. This applies especially to the food of certain species such as the Starling, which has become so numerous and destructive in certain seasons and districts as to be a serious danger to agriculture. Yet for a period of three months—April to June—the Starling is, according to Dr. Collinge, wholly beneficial, consuming enormous quantities of insects which are exceedingly injurious economically. This is especially the case when it is feeding young.

It requires great experience and an elaborate organization to determine by the examination of stomach-contents whether a bird is injurious or beneficial economically, and the subject bristles with difficulties and complications ; but ornithologists could do very useful work by making detailed records of the food given to nestlings ; such observations should, however, be of a systematic and not of a casual nature. The enormous quantity of food taken by the young is perhaps not fully realized. Dr. Collinge states that during its first few days a young bird consumes more than its own weight of food per day. Thus, if we took Surrey with say 460,000 acres, and a pair of Starlings to each four acres and each pair with an average of four young consuming say an ounce each, we have, as a result of this very rough estimation, 13 tons of food consumed in one day by nestling Starlings in Surrey. By Dr. Collinge's analysis of the stomachs of 40 nestlings, 89 per cent. of this would consist of injurious insects.

The parts of Dr. Collinge's book under notice contain a number of interesting introductory chapters and detailed reports on eight species. The first edition was in 8vo and this is in 4to with large margins, and we cannot help thinking this is a mistake, as it is an inconvenient size for a work of this nature, while the published price of 6s. 3d. per part of 32, not very well printed, pages is excessive. There are two plates from photographs, but these were not really necessary and might have been omitted if the cost had been considered.

A Monograph of the Birds of Prey (Order Accipitres). By H. Kirke Swann, F.Z.S., M.B.O.U. Coloured and Photographic Plates. 12½ × 10 inches. (Wheldon & Wesley). Part I. 26s. net. Edition limited to 412 copies.

MR. SWANN has for some years specialized in the diurnal birds of prey, and in 1920 published a *Synoptical List of the Accipitres*, of which a revised edition was issued in 1922. He thus had a basis for this much more ambitious work, which we are told will be completed in 12 parts. This first part contains a short introduction and for the rest deals with most of the Vultures. It also contains four plates in colour by H. Grönvold and one photogravure. An interesting table is given of the genera and forms with their numerical distribution in the various zoo-geographical regions. From this it would appear that the Neotropical region with 170 forms of the total of 692 is the most prolific, the African with 138 next, and the Palæarctic with 110 next.

In nomenclature Mr. Swann has been thorough, giving the original reference, type designation of the genus and typical locality of the species, but it seems a pity that these are printed in the very large type used in the headings. Keys are given for genera but there are no keys for species. The descriptions are brief and to a considerable extent Mr. Swann has used Dr. Sharpe's measurements, which he appears to have translated from inches to millimetres. In his *Synoptical List* the author acknowledged that a good deal of the systematic part was taken from Dr. Sharpe's annotated copy of Volume I. of the *Catalogue of the Birds in the British Museum* and his interleaved copy of Gray's *Genera of Birds*, both of which came into Mr. Swann's possession. No information is given as to how many specimens have been measured and often the sexes are not separated. The distribution of each species is given in some detail and the life history is dealt with, but we should have expected a fuller range of measurements of the eggs, while in the Griffon Vulture we should have thought the fact that they sometimes nest in trees should have been mentioned.

We admire Mr. Swann's courage in embarking on so large and difficult a piece of work; we congratulate him on this first part and shall look forward with interest to his treatment of the many intricate problems which will confront him in future parts.



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REV F. C. R. JOURDAIN, M.A., M.B.O.U., H.F.A.O.U., AND
NORMAN F. TICEHURST, O.B.E., M.A., F.R.C.S., M.B.O.U.

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THE MIGRATION OF THE WOODCOCK IN EUROPE.

("Der Zug der Waldschnepfe in Europa.")

BY

JAMES SCHENK,

(*Royal Hungarian Institute of Ornithology.*)

ABSTRACT.

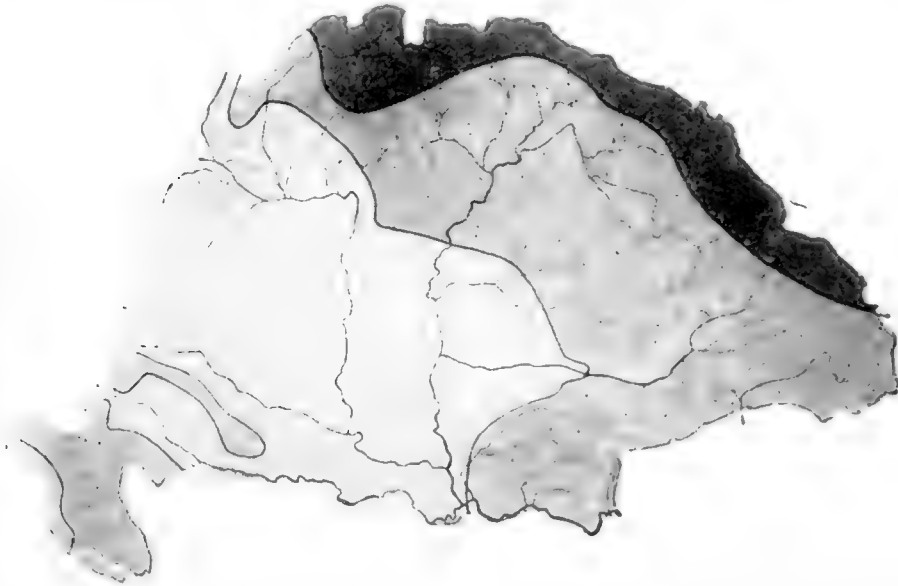
[The original paper was published in *Aquila*, 1924, double vol. XXX.-XXXI., in Hungarian (pp. 26-74) and in German (pp. 75-120), the illustrations and the bibliography being printed in the former version only. The Editors of *British Birds* have been glad to accept the author's suggestion that an English version should be published in their pages. For reasons of space, however, this was practicable only in the form of an abstract. The second half of the original paper, moreover, consists of a general discussion of theoretical questions of bird-migration, and it was felt that justice could not be done to the author's views on these contentious matters by presenting any abbreviated form of his argument; the abstract has therefore been almost entirely confined to the evidence about the migrations of the Woodcock and to its immediate interpretation. For a fuller statement of the facts, for further diagrams, for the references to literature, and for the theoretical dissertation just mentioned, the original source should be consulted. The author has revised this abstract and is of course solely responsible for the opinions expressed.—Eds.]

THE available mass of un-coordinated evidence as to the dates of migration movements was already very great when Middendorff dealt with the subject in 1855, and it has since grown so enormous that it is impossible for any single investigator to undertake the task of working it up. Yet it seems, considering among other things the valuable results obtained from such material by Cooke in North America, that much could still be learnt from studies of this kind. The difficulty, it is suggested, may be overcome if ornithologists will undertake the compilation of migration monographs dealing with particular species. Not only migration dates and other observational evidence should be utilized, but also the records obtained by the marking method. As far as possible the evidence should be drawn from the whole range of the species.

It is a monograph on these lines that the writer has here partially attempted, but he has not found it possible on this occasion to bring the whole mass of available evidence within the scope of his study. The Woodcock (*Scolopax rusticola*) has been chosen because its movements have been well studied both by observational methods and by marking. Mention may be made of the observations by Thienemann in East Prussia and by Weigold on Heligoland, of the studies

by Bütow, and of the investigations into meteorological factors by Hegyföky and by Pittet: the collected marking data, also, have been discussed by Lucanus.

The writer's own studies of the migration of the Woodcock in Hungary, of which he has previously published separate accounts, may be taken as illustrating the value of analyzing migration dates. In accordance with the principles of Middendorff, the observations for many years were used to determine the average dates of the spring arrival of the Woodcock in each locality for which evidence was available, and these dates were plotted on a map of the country. The whole period covered by these average dates was then



Spring arrival of Woodcock in Hungary (pre-war boundaries). Darker colour indicates later arrival.

divided into three equal divisions, and the map was coloured in three zones corresponding to the divisions of the total period in which the local average dates were found to fall.

The data refer to the pre-war extent of the Hungarian Kingdom. As the accompanying figure shows, the earliest zone comprises most of the west, centre, and south of this region; the second zone lies to the north and east of the first and includes the extreme south-east, while the third is a fringe along the north and north-eastern frontier; the extreme south-west forms an isolated tract belonging, according to its dates, to the second zone. The conclusion is that the main direction of immigration is from the south-west

to the north-east, but that the earliest birds traverse the elevated region near the Adriatic coast without coming under observation. By reason of this direction of immigration it happens that the Woodcock arrives much earlier at the point where the Danube crosses the old western frontier of Hungary, in about 48° N. lat., than at the point where the river leaves the erstwhile territory at its south-eastern corner in about 44° N. lat.

Apart from the immediate deductions which can be drawn, it is suggested that maps constructed on this basis will ultimately have a further value in enabling future investigators to determine whether the phenomena of migration remain constant over long periods of time.

Year	Percentage of Arrival Records in each "Pentade"																				Total of Records
	I. 31-II. 4	II. 5-9	II. 10-14	II. 15-19	II. 20-24	II. 25-III. 1	III. 2-6	III. 7-11	III. 12-16	III. 17-21	III. 22-26	III. 27-31	IV. 1-5	IV. 6-10	IV. 11-15	IV. 16-20	IV. 21-25	IV. 26-30	V. 1-5	V. 6-10	
1910	0.1	0.4	1.2	2.0	6.7	11.4	17.2	15.9	16.0	9.6	4.7	4.0	3.0	4.2	1.3	1.3	0.4	0.6	.	.	700
1912	.	0.3	1.3	0.8	1.7	7.5	21.2	22.8	14.8	14.2	6.7	1.8	2.6	1.5	1.6	1.0	.	0.1	0.1	.	614
1906	.	0.3	.	0.3	0.9	3.3	9.6	18.4	15.2	16.7	14.6	7.5	3.0	4.1	2.7	1.7	1.3	0.4	.	.	665
1908	.	0.1	0.1	0.1	0.4	2.9	10.4	15.8	14.6	15.1	9.6	8.8	6.6	5.1	3.6	2.6	1.3	1.3	0.6	0.2	758
1911	.	.	0.2	0.8	1.3	2.0	7.6	10.6	18.2	17.0	14.8	11.3	5.0	4.2	3.0	2.5	0.8	0.7	.	.	598
1913	.	.	0.1	0.4	0.7	1.2	10.1	15.5	23.6	28.7	10.7	4.4	2.3	0.9	1.2	0.1	0.1	.	.	.	572
1909	0.1	1.9	5.1	13.6	21.0	22.4	13.4	8.2	5.4	3.6	3.1	0.8	0.4	0.1	.	705
1907	0.1	0.6	2.8	4.7	7.7	10.7	11.8	11.6	17.6	15.1	8.4	4.9	1.5	0.8	1.4	0.3	711

The data relating to the spring migration of Woodcock into Hungary have been investigated from a meteorological standpoint by Hegyfoky. He has shown that this movement is specially favoured by a weather situation in which there is a depression, or region of lower barometric pressure, over north-western Europe, i.e. in the neighbourhood of the British Isles, with an anticyclonic region in the south.

From six to seven hundred arrival records for the area were available for each of the eight successive years included in Hegyfoky's study. Each year was divided up into five-day periods, or "pentades," and the percentage of the total number of records for the year which fell in each such period was taken as a measure of the magnitude of the movement. The highest percentage figure in each year was considered as marking the culminating date of the immigration. The results are given in the above table.

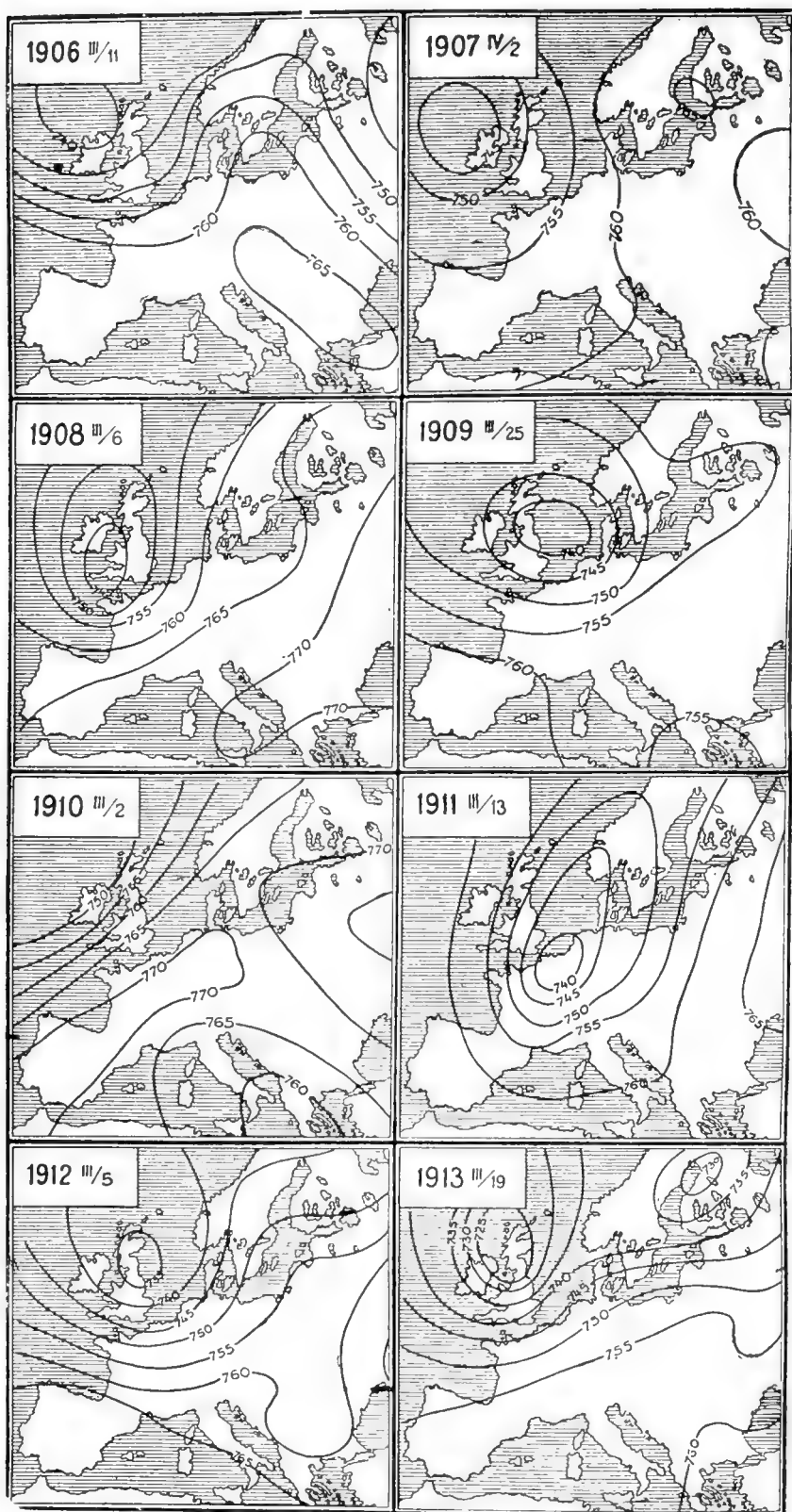
The table shows that the culmination may vary, between one year and another, from the 2nd-6th March "pentade" to the 1st-5th April "pentade." The relationship of this varying culmination date to weather conditions was investigated, and it was found that in each case the culmination occurred when the above-mentioned favourable weather situation prevailed.

This conclusion is closely in accord with the findings of Defandt, who found a similar situation favourable for the spring immigration of birds into Austria, and of Eagle Clarke, who found that a situation characterized by a north-westerly depression over Iceland was favourable for immigration from the south into the British Isles. The writer regrets that the records obtained by the Migration Committee of the British Ornithologists' Club have not been published in a form which permits of comparison with the results of continental observers.

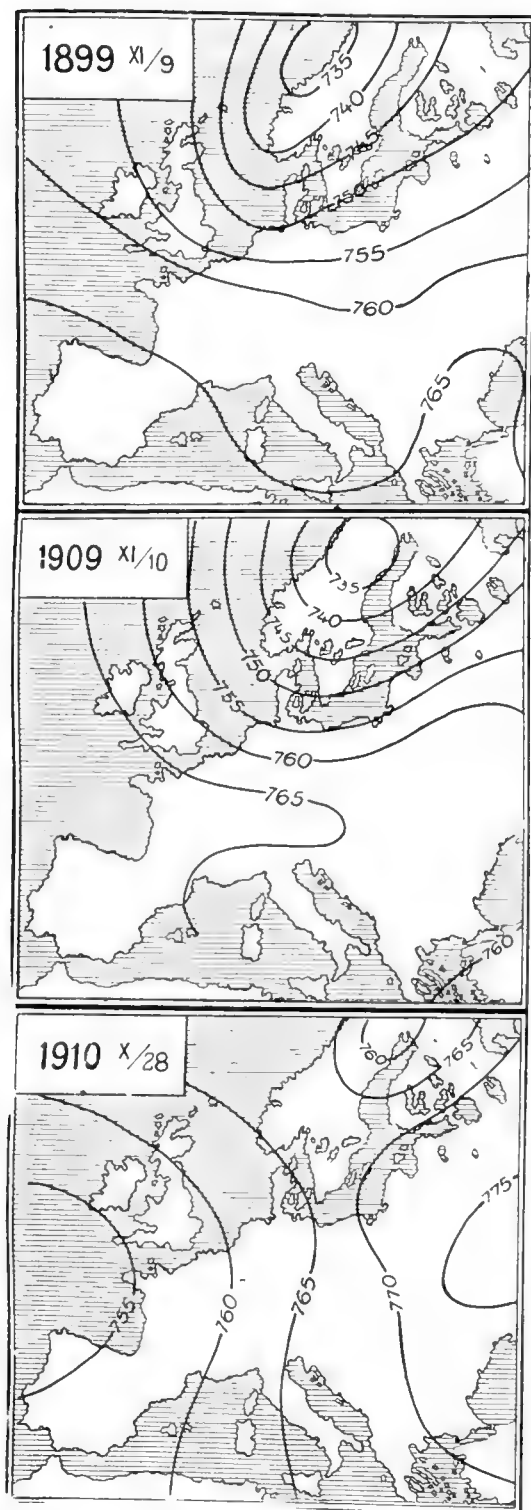
The conclusion of Lucanus that there is normally no close relationship between weather conditions and the dates of migration movements is accordingly not accepted. (The present writer, however, has previously made it clear that he does not claim that meteorological factors offer any complete explanation of migration phenomena.) In the case in point the relationship seems to be well proved, and an understanding of it makes it possible to foretell both the date and the magnitude of the main immigration of the species into Hungary.

The first favourable weather situation (north-westerly depression) which occurs towards the end of February or in the beginning of March will be followed by the arrival of Woodcock on the Adriatic coast and on the plains of the Drave. If the depression is well developed, lasts for some days, and moves slowly eastwards or north-eastwards, there will be a strong immigration which will penetrate also to the north-eastern and eastern districts of Hungary. With the passing of the favourable situation the movement will wane, to increase again when the situation is next renewed; should the situation last for some time the main movement may be completed in a single spell, as happened during ten days in 1913 which produced more than half of the total number of records for the season.

The birds, of course, arrive also to some extent during the intervals when the conditions are less favourable. Weather conditions are not the only factors at work, and they will also not affect in identical manner birds coming from different



Weather situations at the culminating dates of the spring immigrations of Woodcock into Hungary, 1906-1913.

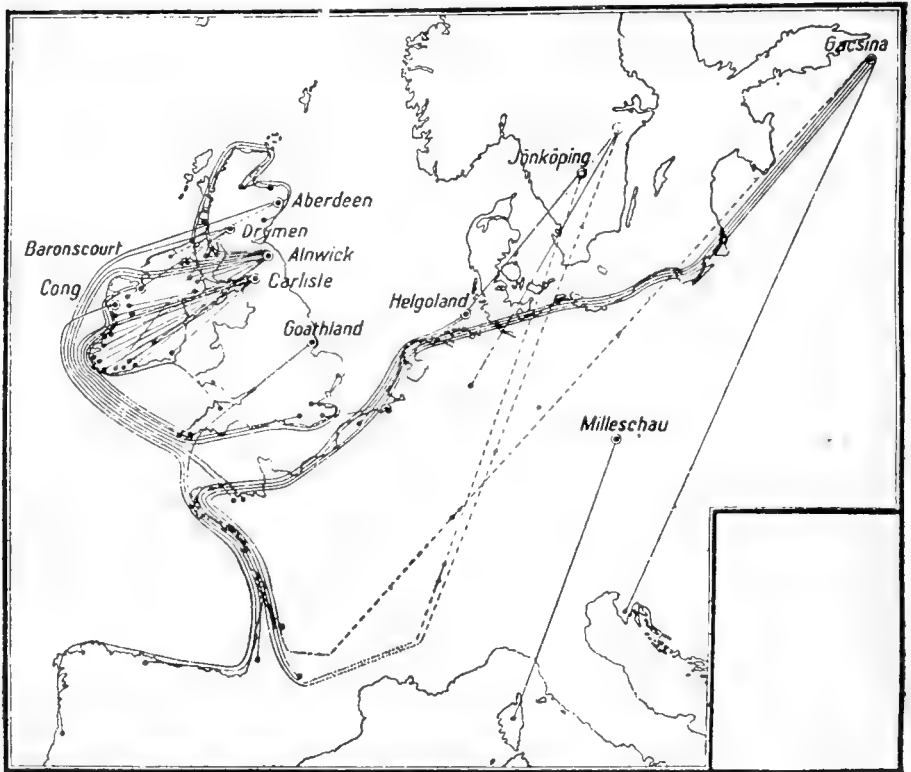


Weather situations accompanying autumn "rushes" of Woodcock observed on Heligoland.

parts of the winter range of the Woodcock which breed in Hungary. But during the prevalence of unfavourable conditions the movement is never on a great scale, and it tends to be weak and belated.

Similar evidence with regard to the autumn migration of Woodcock is lacking for Hungary, but has been obtained in other regions, and shows that a situation marked by a north-easterly depression is favourable. Three exceptionally great movements observed on Heligoland, one by Gätke and two by Weigold, all took place when there was a strongly marked depression over northern Scandinavia. A great "rush" observed by Thienemann in East Prussia took place when there was a similar but more easterly placed depression, and one in East Friesland when the situation was midway between these two. A notable movement recorded by Weigold from Hanau (Central Germany) was marked by a small depression in the extreme north and by another moving over the Baltic Sea. Analogous observations have also been recorded by Pittet.

All the evidence thus goes to show that the combinations of meteorological factors which create certain weather situations have a great influence upon migration. It is, however, to be particularly noted that meteorological influences are effective only within the limits of the appropriate season: outside these limits the favourable weather situation occurs without resulting in any movement. It has therefore to be concluded that these influences can act only when the bird has been rendered receptive to them by other factors in the seasonal



Movements of marked Woodcock, showing supposed directions of flight.

cycle of its life. Briefly, the author's view is that this receptive state is brought about by the action of an internal secretion, or hormone, which is probably produced, in the case of autumn migration, as a result of the abnormal appetites of the birds and the consequent fattening of their body tissues.

The results obtained from the marking of Woodcock may next be considered. All the records showing movement are given on the accompanying map, those not indicating

noteworthy movement, or indicating only return to the place of origin, being omitted.

[A table of all the records is also given in the original paper, but need not be repeated here in addition to the map, more especially as most of them are British records already published in this country. The records given in the table number 147, of which 135 are of birds marked in the British Isles. To these the author might have added the further 33 records of birds marked in co. Sligo, Ireland—of which one was recovered in Spain and the remainder in the region of marking—given by S. R. Douglas, *Proc. Zool. Soc. London*, 1917, 159. There is also the curious case of a Woodcock marked in co. Sligo, Ireland, on 12th May, 1914, and recovered in Shetland on 7th July, 1917, as recorded by W. Eagle Clarke, *Irish Nat.*, 1917, XXVI., 139, and 1918, XXVII., 15. A Woodcock with a Heligoland ring, of which the number was unfortunately not noted, was recovered in co. Tyrone, Ireland, about the beginning of 1924, according to J. A. S. Stendall, *Irish Nat.*, 1924 XXX., 24. For three new records, *vide supra*, p. 18.—EDS.]

The place of marking is shown as a circle with a black centre and the place of recovery as a black spot, a connecting line showing the supposed path of flight. In the case of the few records of birds marked in winter-quarters and recovered further north an interrupted line is used for the same purpose; the fainter dotted lines are hypothetical extensions.

The connecting lines, in the case of autumn migration, have been drawn on the assumption that each bird is taking part in a movement on a wide front and that it sets off from its summer-quarters in a direction which is approximately south-west. It is supposed that this direction is maintained until either an inland station, or the winter locality, or a coastline is reached. In the last case the coast becomes a route which is followed until the winter-quarters are attained. The lines for the few records for spring migration are drawn on the assumption that the birds at that season proceed straight to their summer localities. Admittedly there is no proof that in individual cases these courses have indeed been followed by the birds, but the assumption is based upon a general consideration of all the evidence.

The following general conclusions are suggested:—

(1) The Woodcock is not a typical migrant, in that many individuals are resident even in high altitudes.

(2) Both old and young Woodcock return each year to their native localities.

(3) The winter area of migratory Woodcock in Europe includes Ireland, the south of England, south-western France,

the three southern peninsulas, the Mediterranean islands, and probably also Asia Minor and a portion of northern Africa.

(4) Woodcock from the same summer area often do not seek the same winter-quarters.

(5) Woodcock from different summer areas often seek the same winter-quarters.

(6) Emigration in autumn takes place in an approximately south-west direction and, at its outset, always on a broad front.

(7) When a migrating Woodcock, after a journey of one, two or more days, strikes a coastline, it then almost always follows this as a route to its winter-quarters, which are thus commonly reached by a wide detour.

(8) The following of coastlines frequently does not lead the bird to its winter-quarters but in a different and often opposite direction. Such birds are to be regarded as having lost their way. Commonly they nevertheless reach their winter-quarters in a roundabout way, but many must perish.

(9) Thus the Woodcock in autumn migrates partly on a broad front and partly by following narrow routes. These routes are always coastlines; inland there is only movement on a broad front, and, when on a large scale, this takes the form either of waves or of greater "rushes."

(10) Whether this change from broad front movement to route migration may also be reversed, or whether the two forms may alternate several times, is unknown.

(11) Return in spring takes place in a straight line by the shortest path and thus always as a broad front movement.

From the available evidence in this instance the existence of only three main routes can be recognised, as follows:—

(A) The Western Coastal Route, as Lucanus calls it, which begins on the eastern side of the Gulf of Finland and follows the continental coasts until the winter-quarters in south-western France are reached.

(B) The West Scandinavian Route, which passes over Heligoland and the coast of Jutland and thereafter coincides with the previous route.

(C) The Irish-English Route, which leads from the west coast of Ireland to Cornwall and there divides into two branches; these both join the Western Coastal Route, one

after following the south coast of England and the other by crossing the Channel direct to Brittany. This route, however, does not end in south-western France, but continues to follow the coasts, i.e. those of Spain and of Portugal, and may well end in north Africa.

All other possible routes are based only on supposition. There is, however, very probably an Adriatic-Tunisian Route, such as has been clearly shown in the case of Hungarian birds of other species.

The little evidence which exists on the point—three marking records—indicates that the spring migration of the Woodcock takes place always as a broad front movement in which each bird goes straight to its summer locality. Consequently, as different birds from the same summer area may have different winter-quarters, there cannot be a general north-easterly direction of flight so constant as the usual south-westerly direction first taken in autumn. This explains differences in the directions of spring passage at one and the same station. There is no evidence as to the manner in which British native Woodcock return from winter-quarters in Spain and Portugal.

The author desires to draw the attention of British readers to the opportunities which they undoubtedly have for making valuable observations upon the migration of the Woodcock. In the first place, one of the most important questions raised refers to the existence of the Irish-English Route, as to which direct observational evidence is desirable. In this regard mention may be made of two statements in Rodd's *Birds of Cornwall and the Scilly Isles* (1880): on p. xl. there is quoted a statement by the Rev. Richard Warner (1809) that Woodcock arrive in Cornwall in autumn from the Atlantic, i.e. from the direction of Ireland; on p. 112 a similar statement by a correspondent of Gilbert White is quoted. The scale and direction of this movement should be determined by observations for more than one year at Land's End and on the Irish coast.

In the second place, concerted observations on a large scale could advantageously be made of the directions and dates of the movements of Woodcock in the British Isles; for this two years should suffice. Information could at the same time be collected with regard to such general points as the numbers of birds taking part, differences between spring and autumn, and so on.

In the third place, ringing of Woodcock should be carried out on a large scale for two or three years.

Nevertheless, this collection of data on a large scale should be attempted only if someone can at the same time be found to work out the results. Otherwise the project can lead but to an increase in the mass of un-coordinated evidence and to a discrediting of these methods of study.

[The remainder of the original paper is mainly devoted to a discussion of the theory of migration routes and of the problem of orientation. According to the author, it is an untenable view that routes are relics of the Glacial Epoch and that they follow the original paths of dispersal of the species. He holds that routes correspond to present-day geographical conditions and include no palæo-geographical elements. Orientation, he argues, is of two kinds. Primarily, there is a faculty for taking and maintaining a certain constant general direction, as shown in broad-front migration in spring and autumn. Secondly, there is a faculty for following coastlines, as shown in route migration in autumn. This last is especially characteristic of the passage of the untaught and inexperienced young birds on their first autumn migration. The author believes that, in the case of the Woodcock in Europe, the maintenance of the constant, approximately south-west direction of flight is an act based upon individual experience. The bird knows from experience the warm and cold portions, the so-called winter and summer portions, of its range; and it migrates with knowledge of the direction in which the warm region lies.—EDS.]

NOTES ON THE COURTING DISPLAY AND NESTING OF THE EIDER IN THE TAY ESTUARY.

BY

HENRY BOASE.

DURING recent years, the Eider (*Somateria m. mollissima*) has shown a tendency to nest in increasing numbers on the east coast of Scotland. In this paper it is not intended to deal with this question at length, but it is this increase that makes the display of the Eider one of the familiar features of the lower Tay Estuary in spring.

The display has shown some very definite variation in its broad lines, and some of these are here described. On May 20th, 1922, two males were watched displaying to two females hidden from view by the shelving bank. The males were swimming to and fro with head held high and neck stiff. First one and then the other called a soft crooning note "coo-roo-uh" accompanied by an upward jerk of the bill. Near at hand was a pair, and the male turned towards the female, bowed and raised the bill with curved neck and rising on the water, recalling a similar action of the Mallard, but continued the motion in an upthrow of the bill, giving the love croon, and finishing with a downward jerk of the bill, apparently with the final "uh" of the call. Later, two males were in attendance on one female and she replied to the display of the males with a double call "coo-roo" while holding the head high and neck stiff, and tossing the bill at the moment of calling.

On May 5th, 1923, a group of six males and one female was watched. The males pressed their attentions on the female, crooning and tossing the bill, jostling one another in their efforts to attain a favourable position. The female made reply, extending head and neck in line at a low angle, and sometimes, when so gesturing, made a rush at the more importunate males.

On May 17th, 1924, display was going on actively. Sometimes as many as a dozen males were crowding and jostling round one female, each displaying when he, as it seemed, caught her attention. The actual motions of the display were more formal than had been seen hitherto, for the motion was arrested for an appreciable time with the head held back and the bill slightly elevated, during which pause the croon was probably uttered. The recovery was sudden and sharp,

accompanied by an upthrust of the rear portion of the body. In some instances, it seemed as though the bill was dipped before the backward swing of the head and neck, but without the rise on the water already noticed. As is usual with all duck, individuals rose here and there, beat the wings or merely stretched themselves and settled again, but this is frequent at all seasons. The instant of uttering the croon could not be determined in relation to the posturing, for all around males were calling, and the notes blended into a strange moaning. The females swam about actively among the thronging males, showing no favour to any, and held the head high, tossing the bill from time to time, and perhaps calling. Much of the display took place within a yard or two of the shore and, when so engaged, the birds seemed little concerned with the presence of a watcher.

It was striking to find, on this same day, quite a number of Eider making display up on the sand flats, some distance from the water. The males were fairly active, some running from group to group, others finding interest where they stood. One male ran to another male which was squatting on the sand and made display before it, using the ordinary form of display described above. Later, it squatted before the other male, and the two made display to each other several times, first the one and then the other. Meanwhile, other males were displaying to females, some of which squatted and others stood, and the males at times in jealousy made runs at one another with outstretched neck. The females in some cases were active, holding the head high on stiffly erected neck and tossing the bill, which in some cases was opened, perhaps in calling. The males did not appear to take necessarily the most interest in the females that displayed the most actively. Sometimes a female would leave a group with head high and with two or three males in pursuit, only to turn aside with some other male encountered by chance and perhaps squat without further interest.

Further inland, on a fresh-water pond, a pair of Eider were displaying but departed before any details of their performance could be seen.

The significance of this display so late in May is not quite clear to the writer. The crooning notes have been heard so early as February 16th, yet the display is comparatively rare until May, at least during the afternoon, when all these observations have been made. The plumage of the males has seemed peculiarly vivid; their preponderance has been very great; and the total numbers engaged considerably in excess

of the nesting birds, so far as this can be estimated. By the middle of May the local nesting birds are already incubating, and while there are always a few late nests each year, yet these cannot explain the numbers seen in May. At so late a date it seems somewhat doubtful that these parties can be passage birds on their way north—it rather suggests that a large proportion are non-breeding birds indulging in a little sport—running about on the dry sand flats seems quite unusual for a duck courtship, Sheld-Duck excepted. There is, however, no question that these birds depart from the Tay Estuary before the end of May ; where they go remains uncertain, some may retire out to sea to spend the summer ; others may yet go to nest further north.

During the past ten years, it appears from the information now available, that the Eider as a breeding bird on the Tay Estuary has increased from about twenty-five pairs in 1914 to fifty pairs in 1919, and to about eighty pairs in 1923 and 1924—there having been no change in the last two seasons. Whether these numbers will increase or even be maintained depends to a large extent upon the measure of protection which can be afforded to the nesting birds.

In regard to nesting, certain matters have come under notice in respect of the behaviour of the females during incubation. It is stated in the *British Bird Book* (IV., p. 281) that a female kept in captivity did not leave the eggs during the whole period of incubation. Some little attention has been given to this question, and of the Eider nesting in the Tay Estuary it would appear that the females do leave the nest, particularly during the earlier period of incubation, for the purpose of feeding and washing, and for a time at least the female is accompanied by the male on her return, the latter returning to the sea after his mate has settled on the nest. Whether the female leaves the nest every day or more than once each day has not been determined. It would seem that no fixed time of day is usual for this interval as birds come and go at all hours during the earlier period of nesting ; later it would seem that if the birds go off at all, they do so in the earlier part of the day, for in the afternoon the nests are almost invariably occupied. In this connection, another question has arisen. It has been noticed that on different occasions a nest already located has, on a later visit, been found with eggs covered, but deserted. This would seem to suggest that the female does leave the nest during incubation and that before leaving the eggs she covers them completely. The coincidence of the owner of a nest under observation failing

to return must be somewhat rare. Yet the facts which appear to be demonstrated are by no means rendered less tenable in consequence of the few cases observed. Obviously, the presence of a nest not already located so concealed would be detected only by the accident of stepping on it (unless the concealment was very poor), hence the few records of this nature.

The writer, on one occasion, searched a heather patch from which a female Eider had just departed of its own accord and found there the beginning of a nest containing one egg carefully covered; he has also searched the ground where pairs have alighted (having come in from the sea) but without success, though at the time of year the presence of the nest was most likely. From time to time nests have been found without any covering on the eggs, but it is probable that these were so left owing to the hurried departure of the sitting bird when flushed by intruders. When incubation is advanced, the female, if pushed from the nest, shows little desire to leave the immediate neighbourhood and returns to the brooding as soon as the intruder has left.

Twice during recent years recently hatched young have been found in the nest; in one case these remained at least twenty-four hours. The female and her brood do not cross the moor to the sea during ordinary hours of the day; on the flats a family party has been seen walking out to the water's edge, but these may have been left stranded by the tide. During the early days on the sea the brood keeps in shallow water, feeding in the wash of the tide, if the sea is calm; later they betake themselves to the mussel scalps, and, after a month or so, the young scatter to other feeding ground, particularly to the rocky coasts to the north and south. The downy young commonly band together, and a large pack of thirty to forty may be under the charge of half a dozen females. The usual brood is five, so that some individuals must desert their young soon after the family have reached the sea.

During the autumn and early winter the number of males is again far in excess of the females and immature males, and the proportions remain fairly constant until March, when males decrease and females become predominant in numbers. Later on, as already mentioned, males again become largely in excess and these depart later. During the summer it is of course impossible to determine the relative proportions present, but, for the most part, the numbers in July represent the approximate number of nesting birds.

NOTES

ADDITIONAL NOTES FROM GLAMORGANSHIRE.

As a supplement to the "Field Notes from Glamorgan" by G. C. S. Ingram and H. Morrey Salmon in *BRITISH BIRDS*, Vols. XVI., XVII. and XVIII., the following additional notes from the same county may be of value.

WHITE WAGTAIL (*Motacilla a. alba*).—A pair was seen on the shores of Kenfig Pool on April 29th, 1923.

PIED FLYCATCHER (*Muscicapa h. hypoleuca*).—A male was seen at Merthyr Mawr, near Bridgend, on April 30th, 1922, but it did not remain.

BEWICK'S SWAN (*Cygnus b. bewickii*).—The Bewick's Swans recorded (Vol. XVI., p. 220, XVII., p. 63, XVIII., p. 275) have revisited the same pool on various subsequent occasions, and in various numbers, both in spring and autumn. On November 16th, 1924, a party of four, consisting of two adult and two juveniles, were seen on another pool, not far distant from that on which they were originally found. This pool is tenanted all the year round by one or more pairs of Mute Swans, and it was of great interest to observe a "passage of arms" between the visitors and the rightful tenants, not only as to behaviour but as a comparison in appearance. A Mute Swan sailed across the pool with its wings arched over its back and its feathers raised, to all appearance in anger. At this the party of Bewick's Swans, which had been feeding, all straightened up, raising the necks stiffly to a vertical position, the adults giving vent to a loud piercing cry. On the Mute Swan swimming between and separating the adults from the juveniles, these latter also "gave tongue," but in a higher key, the result being a tremendous clamour. The adults did not show any fight, but the whole party seemed very agitated. On no occasion did the Bewick's Swans arch their wings in the manner of the tame Swans.

Another adult was discovered severely wounded on the shore among the reeds. A few days later, on again going to the pool, they had left, but while watching some other species the Swans appeared flying from the direction of the original pool. On their catching sight of the observer they gave three loud yelping cries, circled once round the water, and winged their way back to Kenfig Pool. On January 24th, 1925, nine

Bewick's Swans were on Kenfig Pool, the largest party seen, divided into one pair with one young one, one pair with three, and one solitary adult. This arrangement was seen by the fact that when alarmed and swimming out to the centre of the pool, on each occasion they divided themselves up in this formation.

PINTAIL (*Anas acuta*).—Two drakes were observed at Hensol on February 24th, 1923, and two at Kenfig on October 26th, 1924, one an adult male and the other an immature bird.

SMEW (*Mergus albellus*).—Two Smew, females or possibly immature males, were seen diving not far from the mouth of the River Ogmore on February 8th, 1922.

GREENSHANK (*Tringa nebularia*).—One at Hensol, October 25th, 1921, and another on the River Ely near Peterston on April 13th, 1924.

RED-THROATED DIVER (*Colymbus stellatus*).—On December 3rd, 1922, and again on December 9th, 1923, one was on Kenfig Pool. On one occasion it came ashore on the sandy bank in a most ungainly manner and shuffled a little way up the bank, but after resting awhile it returned to the water.

GREAT NORTHERN DIVER (*Colymbus immer*).—One was seen on Kenfig Pool, January 24th, 1925.

BLACK-NECKED GREBE (*Podiceps n. nigricollis*).—A pair on December 9th, 1923, on Kenfig Pool.

SLAVONIAN GREBE (*P. auritus*).—One was on the lake at Hensol on January 20th, 1924. CLEMENCE M. ACLAND.

CLUTCH OF DWARF EGGS OF LINNET.

A CLUTCH of five eggs of the Linnet (*Carduelis c. cannabina*) was found in a gorse bush on Cannon Heath, Kingsclere, Hants, at the end of May, 1923. Four of the eggs measured 12×9.5 mm., and the fifth 11×8.5 mm. L. J. EASTON.

[Dwarf eggs occur from time to time in most species of birds, but usually one in a set, occasionally two or three, together with normal eggs. Fatio records a dwarf egg of Linnet even smaller than those mentioned above, viz. 9×6.5 mm. Clutches of dwarf eggs are much rarer, but have occasionally been met with among the Passeres (e.g. Lesser Redpoll, Blue Tit, etc.), and also in the Accipitres, Steganopodes, Rallidæ, Lari and Gallinæ.—F. C. R. JOURDAIN.]

LARGE CLUTCH OF CHAFFINCH'S EGGS.

ON May 21st, 1925, at Burley-on-the-Hill, Rutland, I found a Chaffinch (*Fringilla c. cælebs*) sitting on seven eggs.

The nest was situated in a low bramble-bush, in open park land, and the eggs appeared to be all of the same type and usual pattern, and the product of one bird.

H. L. COCHRANE.

[Clutches of seven eggs have twice previously been recorded in *Brit. Birds* and I have seen two other sets in private collections. A set of eight was recorded in Vol. XIII., p. 81.—F.C.R.J.]

GREY WAGTAILS IN THE LONDON DISTRICT.

IN reply to Mr. Borrer's enquiry (*antea*, p. 30), the Grey Wagtail (*Motacilla c. cinerea*) has for very many years been a fairly regular visitor to Hyde Park, where I have seen it by the Serpentine in every month from August to February, both included. I have also noticed it in Kensington Gardens, both by the Long Water and the Round Pond. It occurs most frequently in October.

During the first two and a half years of the war, I was on early morning duty as a special constable at an electric power station in Wood Lane, Shepherd's Bush. It was the most unattractive spot imaginable, yet it was visited on many occasions in autumn and winter by Grey Wagtails. They invariably appeared with the first streak of dawn, diving down almost perpendicularly out of the darkness on to the edge of a small tank at the foot of a water-cooling tower.

The Grey Wagtail is a regular autumn and winter visitor to the reservoirs at Barnes, where I have known it occasionally to stay into March. I have also once seen it in Hammersmith.

I have little knowledge of St. James's or Regent's Parks. There are various records of the occurrence of the Grey Wagtail in the former; and it visits the latter, for on October 4th, 1886, the keeper of the Western Aviary in the Zoological Gardens showed me two which he had recently caught there and which he said came there from the Regent's Canal; and on November 24th, 1907, I saw a Grey Wagtail alight on a rock in the sea lions' enclosure.

A. HOLTE MACPHERSON.

THE SONG OF THE WILLOW-WARBLER.

IN the spring of 1909 I went out for some weeks at daybreak to note the opening calls and song of different birds. One morning when listening to a Willow-Warbler (*Ph. t. trochilus*) immediately over my head I noticed that between each period

of song the bird made a low sound, several times repeated, of "vip" about as often and as loud as one could whisper it.

I have heard this many times since but have found no reference to it in any account I have read of this bird.

T. J. BEESTON.

REED-WARBLER BREEDING IN CUMBERLAND.

REPORTS of the Reed-Warbler (*Acrocephalus s. scirpaceus*) nesting in the northern counties of England are rare enough to justify me in reporting a nest containing five eggs at Greystoke, near Penrith, Cumberland, on June 15th, 1925.

H. J. MOON.

ALPINE SWIFT IN DORSET.

THE Rev. S. E. V. Filleul of Sandford, near Wareham, informs me that on May 25th, 1925, he and his keeper saw an Alpine Swift (*Apus m. melba*) hawking for may-flies in company with Common Swifts over the River Frome near Moreton. The bird constantly passed quite close to them and the pure white throat and under-parts were very conspicuous. The keeper saw it again on May 26th. This appears to be the first Dorset record.

F. L. BLATHWAYT.

BEWICK'S SWANS IN LANCASHIRE.

ABOUT 8.15 on the morning of January 29th, 1925, a skein of Bewick's Swans (*Cygnus b. bewickii*) flew over Lancaster, heading north-east, and flying in a string about 100 yards in the air. On an electric train passing under them, a most extraordinary thing happened, for they scattered and fell half their height towards it, performing the most astonishing evolutions in the air like those of Plover when alarmed. I have seen wild Geese do this many times when dropping out of the sky to alight, but never heard of wild Swans performing such aerial "stunts," although I have spent days and nights watching Bewick's Swans in the Hebrides. The whiteness of their plumage and the twisting of their long necks made the performance a much more spectacular one than that performed by Geese, and the cause of their panic was probably a big electric spark from the electric train.

In the *Lancs. and Cheshire Fauna Survey Report* for 1922-3 Mr. T. A. Coward remarks that in the early months of 1922 numbers frequented the reservoirs of the Lancashire and Yorkshire border, some being noted close to Oldham and two being killed at Greenfield. The largest herd he had a note of contained sixteen.

Mr. F. W. Holder informed me that on December 20th, 1913, he got within a few yards of five at Ainsdale, near Southport, which were in company with a gaggle of Pink-footed Geese (*Anser brachyrhynchus*), one being shot a day or two later.

In 1908 one was shot with a rifle off Naze Point on the Ribble by a Mr. Orr.

H. W. ROBINSON.

INCUBATION PERIOD OF COMMON SANDPIPER.

IN the nest of a Common Sandpiper (*Tringa hypoleucos*) in Dumfries-shire the fourth egg was laid between 10 a.m. and 12 noon on May 15th, 1925. The first egg chipped at 6 p.m. on June 6th. All were hatched at 10 a.m. on June 7th.

Chipping therefore began after 21 days and 6 hours incubation, and all were hatched within 22 days.

HUGH S. GLADSTONE.

[Cf. previous notes on this subject, Vol. VI., p. 86 and VII., p. 146.—EDS.]

PROBABLE TEREK SANDPIPER IN HAMPSHIRE.

THERE can be very little doubt, I think, that a bird which I saw in Christchurch Harbour on May 16th, 1925, was a Terek Sandpiper (*Terekia cinerea*). It was about a hundred yards distant from where I stood and was feeding near some Dunlins and Ringed Plover. It was distinctly larger than these, but not so large as a Redshank, shaped very like a Common Sandpiper except that it was longer on its legs, not dumpy like a Dunlin. In colour it was grey (like the winter plumage of a Knot) on the upper parts, neck and breast greyish, belly white; beak medium length, as long as a Dunlin's or longer, but with the end definitely turned *upwards*. My daughters and I all saw it and watched it for some time through binoculars.

F. G. PENROSE.

CLUTCH OF WHITE EGGS OF CURLEW.

ON April 26th, 1925, I found on a moor near S. Molton, Devon, a nest of the Common Curlew (*Numenius a. arquata*) containing four white eggs. They were not of as pure a white as those (say) of a Turtle Dove, but they could only be described as "white eggs"—creamy-white—and unspotted save for faint markings on the larger end of one. I noticed the bird did not leave her eggs till I was within twenty or thirty yards, though I had been within a hundred yards of the nest and in full view for several minutes.

T. G. POWELL.

BLACK TERNS IN SCILLY.

DURING the week, April 12th-18th, 1925, I am informed, a pair of Black Terns (*Chlidonias niger*) frequented the pool of Porthhellic, St. Mary's, Scilly.

H. W. ROBINSON.

BUFFON'S SKUA IN THE SCILLY ISLES.

ON May 26th, 1925, whilst about three miles east of the Scilly Isles, I saw what I believe is the first record of Buffon's Skua (*Stercorarius longicaudus*) for these islands. It was a fine specimen and held its tail quite straight like that of a Sparrow-Hawk when flying into the wind, but curved downwards when flying across the wind.

H. W. ROBINSON.

DIVING ABILITY OF NESTLING MOORHEN.

A NESTLING Moorhen (*Gallinula ch. chloropus*), about twelve days old, when flushed from the edge of a pond swam under water for several yards, then dived to the bottom where it remained submerged for two minutes, seven seconds. It then came to the surface to extrude its head and bill and was caught and ringed. When released it swam under water for some yards, came to the surface for a moment to extrude its bill, then dived and was submerged for exactly four minutes before it rose to the surface to breathe. The depth of the water was one foot.

R. H. BROWN.

CUCKOO RETURNING TO SAME SUMMER QUARTERS FOR THE SIXTH SUCCESSIVE YEAR.—With reference to his previous notes (Vol. XVI., p. 190, XVII., p. 23), Mr. T. L. S. Dooly writes that the same Cuckoo (*Cuculus c. canorus*), readily identified by its peculiar call, has again returned to Formby, Lancashire, in 1925.

EGG-DEPOSITION BY THE CUCKOO.—Mr. G. R. Humphreys describes (*Irish Nat.*, 1924, pp. 118-121) how he watched a Cuckoo (*Cuculus c. canorus*) glide down to the nest of a Meadow-Pipit. Having arrived on the ground she moved to the nest with head lowered and outstretched, and, having settled herself upon it, depressed her tail which was afterwards raised to the normal position when she backed out and flew away. From the moment she alighted on the ground to the time she left was forty seconds. The nest, which had not previously been inspected, was found to contain only the Cuckoo's egg, which was warm. It could not be observed if the Cuckoo picked up an egg from the nest or carried one away.

STATUS OF THE SHOVELER IN LANCASHIRE.—Mr. T. L. S. Dooly informs us that he saw a male Shoveler (*Spatula clypeata*) on Down Holland Moss, near Formby, on May 16th, 1925. From the date this was quite possibly a breeding bird. We believe that the Shoveler nests regularly in the county but definite records seem to be lacking and we should be glad of more information on the point.

THE GREAT BUSTARD IN SCOTLAND.—To the *Scottish Naturalist* (1924, pp. 173-183), Mr. H. S. Gladstone contributes a very useful article on this subject. From this it would appear that the only reference to *Otis tarda* breeding in Scotland is the often quoted one by Hector Boethius, who in 1526 stated that it bred in "Merchia" (approximately Berwick and Haddington). This is not confirmed by any subsequent writer and no bones of the bird have been found.

The only records of the occurrence of stragglers during the last fifty years are given as follows: March 29th, 1876, adult female, Stronsay, Orkney (doubtless same as that quoted for 1886 in *Vert. Fauna Orkney*, see also *Pract. Handbook*, II., p. 816); February 8th, 1892, female, Stronsay (shot on adjoining farm to that for 1876 and now in Royal Scottish Museum); June 20th, 1895, female, washed up on Ayrshire coast at Irvine; January 4th, 1924, immature female captured Sanday, Orkneys (*vide antea*, p. 175), and now in Royal Scottish Museum.

LETTER.

WINTER STATUS OF THE WHIMBREL.

To the Editors of BRITISH BIRDS.

SIRS,—In reply to Mr. Glegg's letter (Vol. XVIII., p. 320), my reason for saying that though Whimbrel in winter are uncommon, their occurrence is hardly worth recording, applies only locally, and lies in the fact that one or more Whimbrel, practically every winter, for the past fourteen years, have been captured in the flight nets in the district, together with Bar-tailed Godwits, Oyster-catchers and other Waders, and became so regular that I failed to make a note of them. The only specified dates, besides the one I have already mentioned, is when something else was recorded on the same date, and these dates are November 26th, 1918, and February 24th, 1923, when single birds were seen in the estuary of the Kent, Westmorland.

The period when Whimbrel are caught in the flight nets is the dark of the moon coming between the end of November and the beginning of December, and the same period January-February. During the past four winters other Waders, hitherto unknown on the coast except on the autumn migration and rare even then, have been captured in mid-winter in these flight nets.

H. W. ROBINSON.

LANCASTER.



REVIEWS



Bird Islands of Peru. By Robert Cushman Murphy. pp. 362, XX., illustrated with photographs by the author. New York and London, Putnam's Sons. 15s. net.

THE title of this volume is somewhat misleading, for its scope is greater than is thereby indicated. While the major portion consists of an account of the guano birds and their habits as observed on the numerous islands, there are many chapters relating to other subjects, amongst them some of the best in the book. Chapter VIII., entitled "The Humboldt Current," is a biological study of absorbing interest, for the author here shows that the very existence of the guano industry—as well as other important things—is dependent upon the effects of the Humboldt current. Other chapters deal with the people of Peru, their towns, fisheries and so on. While our author has a somewhat rambling style and tends to wander from topic to topic as though by chance, he writes with ease and clarity and retains the reader's interest throughout. The photographs are excellent and well reproduced. A short bibliography and a good index are provided.

The account of the guano birds and guano industry is comprehensive but not detailed. Numerous original observations on the habits of the birds are included. In addition to the four important guano producers treated of at some length, there are notes on many other species and an annotated list of the littoral birds of Peru. This includes some birds on the British list, such as Phalarope, Sanderling and Grey Plover.

The volume is full of ornithological information. As to the rest, it is of sufficient interest and well enough written to entertain the most hardened bird specialist.

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FIELD-NOTES FROM CUMBERLAND, 1924.

BY

R. H. BROWN.

CARRION-CROW (*Corvus c. corone*).—These birds were breeding early this year. On April 7th I found a nest of five eggs and another on the 8th. In 1923 a pair nested in an oak tree in a field behind my house and reared four young. The same nest was used this spring, a fresh lining added and four young hatched, which were destroyed by a neighbouring farmer. When the nest is built in a fir-tree it is usual for the nest-lining to contain some of the bark-fibre from the tree. Of nineteen nests found this year (and visited, when necessary, until the clutches were complete) two had clutches of two eggs, three clutches of three eggs, three four eggs and the rest five eggs.

The nestlings are brooded during the day until they are five or six days old and during the night until nine or ten days old. It is whilst the young are fledging that the adults are most demonstrative, and if the nest is visited during this period they frequently circle in the air above the tree, repeatedly calling, and now and again alighting in a neighbouring tree, but the young rarely answer them and the adults do not lose all wariness but keep a respectable distance away from the intruder. These fledged youngsters have a strong, musty odour.

ROOK (*C. f. frugilegus*).—On December 18th, 1923, I was watching a flock of Rooks scattered about a grass-field when my attention was attracted by a male courting a female. Suddenly from further afield two Rooks came flying and alighting beside the male attacked him. The female joined in, to the male's assistance, I think, and the four engaged in a general *mêlée*.

On January 7th I noticed a flock of Rooks in a field. Many were courting, others were sitting together in pairs, now and then fondling bills. One pair, the female opened her beak and the male placed his inside, disgorging some worms from his pouch into her mouth.

Courtship was first observed this autumn on November 3rd, a male, with drooping wings and expanded tail, bowing to a female, she acknowledging his attentions by a slight bow now and again.

On August 14th I surprised five Rooks feeding off a dead rabbit and the same day had an excellent view of a Rook flying away with a mushroom.

GOLDFINCH (*Carduelis c. britannicus*).—This spring I watched four pairs nest-building. The female did all the building and lining of the nest, the male's duties consisting in accompanying her for nesting materials. They left and returned together and whilst the female was busy at the nest the male kept guard from a near-by branch, indulged in song, or occasionally visited the nest to see how the work was progressing or in order to copulate. Once or twice a male was seen to pick up nesting material, toy with it, and then drop it. When the nest was being lined the male spent most of his time singing and did not accompany the female so often on her journeys for material. The males gave most song during the period of nest-building and egg-laying, and by the end of the first week of incubation, which was performed entirely by the females, song had practically ceased. The last few days the young were in the nest, song again became vigorous, whilst if the eggs or young were destroyed the male was singing vigorously the following day.

The female was called off the eggs each morning for about twenty minutes and usually she was called away to feed, but sometimes the male fed her at the nest.

The second brood of a pair which nested in my garden left the nest on August 29th. From the 26th onwards the male was singing, and on the 28th he was so engaged when the female alighted in the tree beside him. He attempted coition but she would not allow him and flew away. After an interval he followed her.

On May 18th I observed three Goldfinches in a tree, two males and a female. The males were flying at each other, then falling to the ground with locked claws, uttering all the time a loud, harsh, call-note. The female appeared oblivious of their presence.

In this neighbourhood the autumn flocks have usually split up into parties of four to six birds by the turn of the year, but occasionally flocks may be seen during January and February. Thus a flock of twenty-five birds near Linstock on January 15th, 1917, and of fifteen near Dalston on February 4th.

LESSER REDPOLL (*C. linaria cabaret*).—A nest examined on May 15th was lined entirely with wool.

TREE-SPARROW (*Passer m. montanus*).—Within a ten-mile radius of Carlisle I found this species in five different localities. About the middle of June I discovered three pairs frequenting the line of trees, and a week later saw another pair in a second locality. On June 16th in a third locality I saw a male

feeding a female, and in another neighbourhood found a pair breeding in a hole in a barn wall. The male was singing on May 22nd but the young were not heard in the nest until the first week of July. In the fifth locality four pairs nested—one in a knot-hole in an oak tree reared one brood, the others in holes in a barn wall, and each reared two broods. On July 2nd I got one young one, which was fledged, out of the nest in the knot-hole and judging by touch there were only two more. Of those that nested in the barn wall, one pair were building on May 7th. Both sexes had nesting material but only one entered the hole while I watched them, the other dropped its material. Both sexes assisted in feeding the young, which from hatching until they left the nest kept up an intermittent chirping, audible twelve yards away. The first brood was heard on June 5th and last on June 18th. Another brood was in the nest from August 9th until 22nd, and the last was hatched on August 23rd and left the nest on September 6th. Thus the fledging-period appears to be thirteen to fourteen days. At this locality on October 26th I picked up a dead Tree-Sparrow in perfect plumage.

On October 21st I saw a Tree-Sparrow amongst some House-Sparrows about four miles north-west of Brampton.

YELLOW BUNTING (*Emberiza c. citrinella*).—On April 6th I saw a hen building, and another nest which was begun on April 17th held one egg on the 24th. A third nest held three eggs on April 29th.

During August I watched two pairs feeding their young on crane flies (*Tipula paludosa*).

WHITE WAGTAIL (*Motacilla a. alba*).—On October 7th three White Wagtails were about my grounds, and at times being with an adult Pied Wagtail were easily distinguished.

PIED FLYCATCHER (*Muscicapa h. hypoleuca*).—For three consecutive years I found a pair nesting in the same branch-hole at a height of thirty feet from the ground. The male was very pugnacious and would drive away any Chaffinches or Tits which tried to alight in the tree. I could not find them nesting there this year. In another locality I flushed a pair out of an oak tree on May 4th. On two subsequent visits I failed to find the birds, but on May 18th they were building in the same tree. Only the female carried nesting material, the male accompanying her on her journeys and singing whilst she was in the nest-hole. On May 24th the nest held three eggs and on the 28th the female was sitting on six. The female was the only bird found incubating and the young, four in number, hatched on June 10th, incubation-

period thirteen days, and flew from the nest on June 24th, fledging-period fourteen days. The two eggs were left in the nest. When the young were nine days old I timed the adults feeding them for one hour, during which the female fed them seven times, the male five times. The fæces were carried away and dropped. In this tree a pair of Blue-Tits and of Tree-Creepers also nested. About a mile below this site two pairs of Pied Flycatchers nested and on June 29th both males were seen, each feeding a solitary fledgling. One male was flycatching just above the surface of the water.

WOOD-WARBLER (*Phylloscopus s. sibilatrix*).—On May 27th I was watching a Wood-Warbler singing, when presently it began gathering nesting material off the ground, and having secured a beakful it hovered for a few seconds above the nesting-site before descending. The nest had apparently just been begun on this day, and on June 2nd it held two eggs.

WHITETHROAT (*Sylvia c. communis*).—This species undoubtedly rears two broods at times, even in the north. Thus near Silloth on July 29th, 1918, I found a nest containing two newly-hatched young and one egg. Other late dates are July 9th, 1917, nest of two newly-hatched young, and July 12th, 1922, nest of four young about six days old.

MISTLE-THRUSH (*Turdus v. viscivorus*).—On August 30th I listened to two Mistle-Thrushes singing, and on October 2nd and 9th one was singing in my garden.

A nest which I had under observation, practically all the incubation, which lasted fourteen days, was done by the female, the male only assisting for about an hour each day. The fledging-period was fifteen days and both sexes fed the young. This nest was the birds' third attempt to rear a brood and whenever I visited it the female attacked me, hitting me in the face with her wings. This she did when the nest held eggs and when it held young.

REDBREAST (*Erithacus rubecula melophilus*).—The courtship of the Redbreast appears to be carried on intermittently from October onwards. In the first stage the male and female meet on the boundary of their respective territories and the male, with head thrown back, sings to the female. Then usually the female flies back into her territory and the male returns into his. Sometimes the female enters the male's territory or *vice-versa* and the action proceeds as above. On November 12th I was watching two Redbreasts, presumably male and female. The male, with head thrown back, sang for some time to the female. When he had finished the female uttered a few low notes then flew away. The courtship in

the second stage appears to be carried on irrespective of the boundaries of the territories and the male usually follows the female about, or two males may pursue one female. The male sings a little, the female listening attentively, the two birds separated by a few inches. Then she moves on, he follows, and when she stops he once more bursts into song. Occasionally they may fondle beaks. On January 3rd I was walking along a lane when two Redbreasts came flying over the hedge-top, and after a slight scuffle on the ground flew to the hedge. One began singing, with neck slightly outstretched and drooping wings, the other listening attentively with bowed head. When the former had finished, the latter sang a couple of bars, then flew away pursued by the other.

A male was seen displaying to a female on February 18th. With tail held almost vertical he slowly moved his head from side to side, singing vigorously all the time. The display lasted for several minutes, terminated by the female flying away, he pursuing her.

WREN (*Troglodytes t. troglodytes*).—On November 5th two Wrens were about my garden, the male singing vigorously to the female and following her about. On one occasion he flew to a post and with extended horizontal wings pivoted in a half-circle, singing all the time. Two Wrens were observed pursuing each other about the garden on November 13th. One flew into a bush, the other alighted on the ground at its base. The one in the bush burst forth into vigorous song, the other listening attentively. When the first Wren had ceased the other sang, a song as loud and vigorous as the former's.

DIPPER (*Cinclus c. gularis*).—In a nest of five eggs, four hatched on April 16th, the other the next day, but this young one disappeared and the four young flew on May 5th, giving a fledging-period of nineteen days.

Dippers will use the same nest year after year, relining it for each clutch of eggs. The lining, usually oak or beech leaves, the birds obtain, I think, from the stream bottom, as the leaves are generally very wet when first placed in the nest.

TAWNY OWL (*Strix aluco sylvatica*).—The following notes deal with the fledging-period of the Tawny Owl. Observations on the first nest ceased through my leaving the district :—

1921. Old nest of Carrion-Crow.—April 8th : Owl flushed off three eggs, one well chipped and the nestling calling inside. April 12th : Two nestlings out and the other egg well chipped. Heard the young when I reached the tree. April 19th :

Flushed an adult off the three young, which are different sizes, the two larger birds beginning to fledge. Nest very dirty with faeces and held two headless long-tailed field-mice. April 26th: Climbed to the nest. When half-way up the tree an adult attacked me, striking my left ear with its talons and drawing blood. Just as I reached the nest it again attacked, butting me in the small of the back. After this it flew to a neighbouring tree and hooted. Only two nestlings, one considerably larger than the other, and resenting my presence with a "clicking" noise. The nestlings are fledging rapidly and are practically feathered on the mantle and beginning on the head and breast, whilst the flight-feathers are growing out of the quills.

1923. Nest in a hollow tree.—April 25th: Flushed an Owl off three nestlings, all different sizes, the smallest still in down, the others have the quills of the flight-feathers appearing. Judge the largest to be eleven days old, the smallest seven days. Three headless long-tailed field-mice in the nest. May 3rd: Nestlings feathering well on the mantle and starting on the head and breast. Two rats, headless, for food. May 8th: Three young still in the nest which held the remains of a Blackbird and a Song-Thrush. May 19th: Still three young, practically feathered, but the legs are still in down. A headless rabbit in the nest. May 20th: Only the youngest Owl in the nest, and by the 23rd this one had flown. The fledging-period was thus thirty-four to thirty-six days.

1924. Nest in hollow tree.—April 20th: Owl put off three young, which are different sizes, the two larger ones have their eyes open and the quills of the flight-feathers appearing. The other is still in down and eyes shut. Take them to be eleven, nine and seven days old respectively. Two young rabbits, headless, in the nest. April 25th: Visited the nestling Owls and found an adult brooding them. They are feathering on the mantle and head, and the wing-feathers are growing out of the quills, but the two older nestlings are considerably larger than the other. I took this youngest Owl in order to hand-rear it. The nest held the remains of a black water-vole and a Song-Thrush. May 4th: Two young feathering rapidly, feathered on the mantle, head, face, and breast, and the wing-feathers growing. The older bird has its tail-feathers almost fully developed, the other just starting its tail-feathers. May 11th: As I climbed to the nest an adult attacked me twice, on each occasion striking the back of my head with its talons. The young were sitting

on a branch near the tree top and the older bird flew down to the ground and was replaced in the tree. Both Owls fledged except for a little down about the eyes and the legs, which are still in down. The hand-reared Owl was in juvenile plumage (legs in down) by May 18th, and allowing the others two more days for fledging and the fledging-period of the three was thirty-two to thirty-five days.

The hand-reared Owl's legs were not feathered until June 15th, by which date the mantle was in winter plumage and the head and breast assuming winter plumage. The nestling Owl has the mouth inside a pale flesh-colour, the tongue with two light brown marks. The eyelids are pink and are still this colour when fledged.

On April 11th I surprised a Tawny Owl out of an ivy-clad tree, and climbing to the branch the bird had flown from I found the remains of a Song-Thrush and the still warm body of a rabbit. The head of the rabbit was skinned, but there were no signs of the fur, and the tongue and front of the skull were gone.

COMMON BUZZARD (*Buteo b. buteo*).—In 1923 I found a pair nesting in an oak tree in a wood. The nest was placed some distance along an outspreading branch. On June 27th it held three eggs. On July 8th there were two young about a week old, and these flew from the nest on August 11th, when I visited it, so that the fledgling-period was about six weeks. By the time the young left the nest it was flattened out, and beside it was a platform where the food was evidently placed. There was a little down about the nest when it held eggs and young. The Buzzards nested in the same tree this year. I was unable to visit the wood until June 21st, and on climbing the tree found the nest near the top and in a branch-fork against the stem. It had been robbed. There was a little down in the nest-cup and the rim was decorated with fresh larch twigs, although the wood consisted of oak and ash trees.

In 1922 a pair nested on a rock ledge beside a mountain-ash. On May 22nd the nest held three young, two larger than the other, clad in a greyish down. Cere yellow, rest of the bill black, tip horn-colour. Legs and feet yellow, claws grey. Inside mouth flesh-colour, tongue with two lateral blue-grey spots at the base and one at the tip. The nest-rim was decorated with fresh mountain-ash twigs and held two perfect field-voles. On June 8th there were still three young, and the locality was not visited again until August 28th, when five Buzzards were seen soaring round, so it is

probable that the three young were safely reared. In 1923 the locality was not visited, but this year a visit was paid on April 12th and the nest was being built not far from the 1922 site. When next visited on June 20th it had been robbed. Near it was an unlined nest of the Common Wren. There were several castings of beetles' wings about the Buzzard's nest.

A third nest found this year was in an adjacent county, but as I was able to pay several visits to it I give the observations here. On May 29th the nest, on a rock ledge below a mountain-ash, held two young, two days old, and one chipped egg, the young one calling inside. The nest-rim, as usual, was decorated, this one with fresh mountain-ash twigs, and also held the perfect bodies of four field-voles and one shrew-mouse. On June 9th there were only two young, covered with a coarse greyish down, the quills of the flight-feathers appearing. Near the nest was the putrefying carcass of an ewe on which the young were being fed. Both young were opening their beaks a lot; one always drew back when I approached it with my hand. As I did not know whether I should be able to visit them again I ringed them. On June 22nd the nest held one young one, grown considerably since my last visit. There were no signs of the other, either in the nest or under the rock ledge. The nestling had the flight-feathers practically developed and the tail-feathers were about two-thirds out, the mantle was feathered and the upper-breast beginning, the rest still in down. A perfect Sky-Lark, *i.e.*, not headless or plucked, and two pellets, the larger measuring $1\frac{3}{4}$ in. by $\frac{3}{4}$ in., were in the nest. The pellets consisted mainly of vole-fur, but one contained the legs and feet of a Meadow-Pipit. The nest was visited for the last time on July 6th. The young Buzzard was resting on its tarsi, and as I drew level with the nest it rose to its feet and essayed its first flight. Rising into the wind it made a semicircular glide and alighted on the cliff-side. Flushed from here it made another semicircular flight and again alighted on the cliff-side. Put up once more it flew across the stream and pitched into a bed of rushes, where it was left. The fledging-period was thus forty days. The nest held the remains of a Meadow-Pipit and a Wood-Pigeon, but was not decorated with fresh twigs as it had been on my previous visits. I never at any time saw any down about the nest.

At times the Buzzard will hover in one place, with wings held horizontally, like a Kestrel. One day I was watching

three Buzzards hovering, and two were hovering with half-closed wings, remaining for some time in one position.

SHELD-DUCK (*Tadorna tadorna*).—On July 8th I was on one of the Solway Marshes, and approaching the banks of a small stream noticed a pair of Sheld-Ducks flying restlessly round and round a certain portion of the stream, uttering all the time a low-pitched “urk, urk.” On reaching the bank side I found on the water a brood of eight or nine Sheld-Ducks, which on my appearance began spreading out, moving upstream and first one and then another dived and swam under water. In diving their feet hit the surface with considerable force. As I followed them upstream they continued diving and began swimming past me under water so that presently all were making for the estuary. The water was too opaque to see how the young progressed underneath it, but they swam a distance of twenty-five to thirty yards under water.

OYSTER-CATCHER (*Hæmatopus o. ostralegus*).—Like most Waders, these birds make several nesting-hollows on the marsh, and the one that is used for breeding purposes is often lined with sheep’s dung. Where there are only two eggs a stone is sometimes pulled into the nest. For the first two or three days after hatching the young do not go far from the nest and remain together. If handled, on being released, they usually run off and take fresh hiding. As they grow older they learn to remain in the same place even if handled. When fledged, and before they can fly, they will often run off after being handled. The adults do not appear to brood the young after they are three or four days old. When the nests are placed on the marsh edge, adjoining the mudflats, as soon as the tide retreats the young are driven on to the mudflats and hide close up beside the marsh edge with their backs to the estuary. When hidden in this manner they are no doubt less liable to be trodden on by the marsh cattle and are perhaps safer from human intruders.

LAND-RAIL (*Crex crex*).—On June 19th my neighbour, Mr. Blacklock, was scything the grass in an orchard. Happening to glance back he saw a Land-Rail sitting on the ground. The bird running away, he found she had been sitting on a nest of fourteen eggs, which he had scythed over without noticing and, owing to the eggs lying in a depression, none were broken. He finished mowing the grass and cocked it the same day and fortunately the Land-Rail did not desert, although the nest was now exposed and only six yards from the cottage. As I did not know how long

the eggs had been incubated I visited the nest daily. The bird used to brood the eggs until one was five or six yards away, then would swiftly run away. The same bird, the female I think, was always put off the eggs, and the male was never seen, even when the young were out. A Land-Rail was heard craking in this orchard until the first or second week in June, but certainly after the nest was found I never heard the craking in the orchard.

At 6 p.m. on June 30th one nestling was hatched. On July 1st at 6 a.m. there were seven nestlings. The female ran two or three feet from the nest and then faced me, making a "clicking" noise by snapping her bill, and at times, with half-opened wings, uttered a high-pitched crooning note with her bill closed. Beside the nest were the remains of four eggs. At noon these eggshells had disappeared and the female was brooding nine nestlings a few feet from the nest. The nestlings were replaced in the nest and two more eggs were seen to be chipped. At 6 p.m. there were only two eggs in the nest, which I broke and found infertile. The female was found brooding the twelve nestlings under the shelter of a hay-cock. She ran away from them and, facing me, performed as already described. As the hay was to be lifted this evening I placed the nestlings for safety in the hedge-bottom. Later in the evening the female was seen running backwards and forwards across the road and presently two nestlings emerged from the grass and ran across the road. Looking about the grass I found the rest of the chicks and carried them into a neighbouring pasture-field. As they all hatched within twenty-four hours it seems that incubation did not begin until the clutch was laid.

THE NESTLINGS OF SOME RARE BRITISH BIRDS.

BY

H. F. WITHERBY.

DURING a visit to central Spain this summer, my wife and I were able to find a certain number of nestlings of birds on the British list, which were not described or were imperfectly described in the *Practical Handbook*. I took detailed notes on the spot and preserved in alcohol specimens of each, and these are now in the Natural History Museum. Many were collected on the estate at Rincon (Province Avila) of our friend the Spanish ornithologist Señor Don Augusto Gil Lletget, to whom our grateful thanks are due for much kind help and generous hospitality.

It seems not out of place to append two notes correcting and amplifying what I wrote in the *Handbook* under "Field-Characters" regarding the songs of the Orphean and Rufous Warbler.

ORPHEAN WARBLER.—Vol. I., p. 363.* Very little of the song is like the Blackcap and this is softer and not heard at any distance. The distinguishing phrase of the song is loud and not very musical, very difficult to syllabilize, and is not really satisfactorily expressed by "chee-uvvy-uvvy-uvvy." This is heard constantly and can be distinguished at a considerable distance.

RUFIOUS WARBLER.—Vol. I., p. 387. This song is somewhat disjointed, composed of short phrases of clear, lark-like notes which form its distinctive characteristic.

NESTLINGS.

GOLDEN ORIOLE (*Oriolus o. oriolus*).—Vol. I., p. 40. Down, buffish-white, rather short but fairly plentiful; distribution, outer and inner supra-orbital, occipital, spinal, humeral, ulnar, femoral and ventral.† Mouth, inside bright pink, no spots; externally, gape-flanges whitish. N.B.—Feathers beginning to grow. Rincon, near Candelada (Avila), Spain. June 7th, 1925.

SERIN (*Serinus canarius serinus*).—Vol. I., p. 71. Down, pale grey, longish but rather scanty; distribution, inner supra-orbital, occipital, spinal, humeral, ulnar, femoral, crural and ventral (very short on ventral tract). Mouth,

* References to volume and page in the *Practical Handbook* where the species is described.

† This description is in agreement with that given by Mr. Collingwood Ingram, who described the down of the nestling Golden Oriole in *The Ibis*, 1920, p. 876.

inside bright pink, no spots; externally, gape-flanges pink, edges of mandibles greenish-yellow. N.B.—About two days old. Guadalupe (Caceres), Spain. May 20th, 1925.

ROCK-BUNTING (*Emberiza cia cia*).—Vol. I., p. 124. Down, smoke-grey, long and fairly plentiful; distribution, inner supra-orbital, occipital, humeral, ulnar, spinal, femoral, crural and ventral. Mouth, inside yellowish-pink, no spots; externally, gape-flanges whitish. N.B.—Just hatched. Puerto del Pico, Sierra de Gredos (Avila), Spain. June 13th, 1925.

WOOD-LARK (*Lullula arborea*).—Vol. I., p. 160 and Vol. II., p. 891. Down, darkish smoke-grey, darkest on supra-orbital and occipital tracts, long and fairly plentiful; distribution, inner supra-orbital, occipital, humeral, ulnar, spinal, femoral and ventral (short and scanty). N.B.—The spinal tract single at its caudal end, divides into a Y shape about the middle of the back. Mouth, inside deep yellow, round black spot at tip and two very small black spots at each side of middle of tongue; externally, gape-flanges yellowish-ivory-white. N.B.—Just hatched. Rincon, near Candeleda (Avila), Spain. May 30th, 1925.

WOODCHAT SHRIKE (*Lanius senator senator*). Vol. I., p. 268. Down, whitish, very short and very scanty and scarcely noticeable with naked eye; distribution, ulnar and ventral. Mouth, inside orange, no spots; externally, gape-flanges yellow. N.B.—One or two days old. Skin yellowish, no feathers yet sprouting.* Rincon, near Candeleda (Avila), Spain. May 26th, 1925.

ORPHEAN WARBLER (*Sylvia hortensis hortensis*).—Vol. I., p. 361. No down, skin rather dark flesh-colour. Mouth, inside orange-yellow, two oblong dark (blackish) lateral spots at base of tongue and two smaller and paler ones at tip; externally, gape-flanges greenish-yellow. N.B.—About two days old. An older—feathered—bird had the gape-flanges yellowish-white and not greenish as the younger

* Mr. Collingwood Ingram (*l.c.*, p. 879), states that white down has been noticed to appear between the feathers on the wings and in apteria on several parts of the body. He also states that down has been noticed on the ventral tract in *Lanius collurio* at all events when as much as four days old. Unfortunately, the many other nests I found of Woodchat contained either eggs or feathered young and I was able to examine only the one unfeathered brood. Of the Red-backed Shrike I have also examined only one brood (one or two days old) and in these I could find no down at all. It seems possible that there is individual variation in these birds in which the down is so poorly developed.

ones. Rincon, near Candeleda (Avila), Spain. June 14th, 1925.

SUBALPINE WARBLER (*Sylvia cantillans cantillans*).—Vol. I., p. 380. No down. Mouth, inside orange, no spots; externally, gape-flanges yellowish-white. N.B.—Feathers partly grown. Rincon, near Candeleda (Avila), Spain. May 24th, 1925.

BEE-EATER (*Merops apiaster*).—Vol. II., p. 20. No down, skin rather bright pink-flesh. Mouth, inside flesh, no spots; externally, gape-flanges very small and inconspicuous, dull yellowish; bill straight, grey. N.B.—Two or three days old, back of tarsus rather flattened and "heel" with a soft flat pad. Rincon, near Candeleda (Avila), Spain. June 16th, 1925.

HOOPOE (*Upupa epops epops*).—Vol. II., p. 23. Down, white, fairly long but rather scanty; distribution, outer and inner supra-orbital, occipital, humeral (long), ulnar (very short), spinal, femoral, crural, ventral (very short), and a caudal tuft. Mouth, inside bright pink, no spots; externally, gape-flanges large, thick and very conspicuous, waxy-white. Bill straight and rather thick, dark bluish-slate. N.B.—Feathers just beginning to grow. In the description in the *Handbook*, from a feathered skin, down on the outer supra-orbital tract was omitted. A small roughened "pad" at back of tarsal joint. The marked difference in the gape-flanges of the Hoopoe and Bee-Eater, both birds nesting in dark holes, is worthy of note. Rincon, near Candeleda (Avila), Spain. May 27th, 1925.

LESSER KESTREL (*Falco naumanni naumanni*).—Vol. II., p. 125. Down (c) is white not buffish as in Common Kestrel, so that older birds with this second longer down are easily distinguishable from young of the Common Kestrel in the same stage. N.B.—Claws white, not dark as in young of Common Kestrel. Arenas (Avila), Spain. Female parent caught and identified June 16th, 1925.

MARSH-HARRIER (*Circus æruginosus*).—Vol. II., p. 148. A bird just hatched may be described, as it differs somewhat from the description of the same down given in the *Handbook*. Base of neck all round, back between wings and upper surface of wings pinkish-buff and a faint buff tinge down centre of lower back and rump; buffish round eyes; eyelids blackish, rest of down white, conspicuously so on crown. Bill, upper mandible black; lower mandible, cere and gape pink-flesh; feet pinkish-yellow. N.B.—One day old. Hatched under a hen. Rincon, near Candeleda (Avila), Spain. June 17th, 1925.

NOTES

DWARF EGGS OF YELLOW BUNTING.

ON May 29th, 1925, near Felsted, Essex, I found a Yellow Bunting (*Emberiza c. citrinella*) sitting on one diminutive egg, not as large as a pea; a few days later she was still sitting on this one small egg. I took the egg as a curio; it was yolkless, very thick shelled and well marked. A few days ago the same bird had another nest and was sitting on another diminutive egg, the nest being only a few yards from the previous one. To-night, June 24th, I took the egg as she had been sitting on it nearly a week to my knowledge. This again was yolkless. It differed from the first by being much longer, less well-marked, and the shell rather fragile. J. H. OWEN.

SPOTTED FLYCATCHER AND WREN NESTING IN SAME CAVITY.

I HAVE just been shown rather an interesting example of combined nesting. The nests, one of a Spotted Flycatcher (*Muscicapa s. striata*), the other of a Wren (*Troglodytes t. troglodytes*), were built in the trunk of a live holly, about seven feet from the ground, where broken branches have left two decayed holes, one immediately above the other, each giving access to a common cavity within. The diameter of both holes is about four inches. On the "ground floor" is a normal Wren's nest, with the usual small opening in the centre of the lower hole; immediately above, and woven into the roof of the Wren's nest, is the Flycatcher's nest, about level with the upper hole.

The occupants had flown when I saw the nests, but I am told that both birds were incubating at the same time, and both broods successfully reared. CHARLES E. ALFORD.

[Competition between hole-breeding birds (such as Tits, Robins, Redstarts, Flycatchers, etc.) for nesting-sites is generally keen and occasionally results in nests of different species being placed in close proximity. For instances of Spotted Flycatchers building on nests (mostly old ones) of other birds see *Brit. Birds*, Vol XI., p. 87.—EDS.]

MARSH-WARBLER BREEDING IN NORTH DORSET.

A PAIR of Marsh-Warblers (*Acrocephalus palustris*) had their nest in the Yeo valley between Sherborne and Bradford Abbas this year (1925). The nest, found on June 21st, was suspended by "basket handles" to small reeds and nettles growing at the side of a ditch in a grass-field by the River

Yeo. It contained five typical eggs. The song of the bird, heard on this date near the nest, differed widely from that of the Reed-Warbler.

The Rev. F. L. Blathwayt recorded (*Brit. B.*, XI., p. 44) Marsh-Warblers breeding in the same district in 1897, but this is, so far as I know, the only other record for north Dorset.

R. V. PAYNE.

MISTLE-THRUSH NESTING ON A SPOUT.

A LADY whom I was visiting on the outskirts of the city of Chester on May 24th, 1925, drew my attention to a nest containing two young birds placed on the top of a spout about a yard from her window. While we watched, a Mistle-Thrush (*Turdus v. viscivorus*) flew up and fed the young. The spout has a wide ornamental top known as a "rain-water head," over which is a covering of iron or zinc. This formed a platform for the nest, which was completely protected from rain by the projecting roof of the house about eight inches above.

W. HENRY DOBIE.

[While nests of the Mistle-Thrush on stone walls and rocky ledges are not uncommon in hilly districts, those placed on buildings are much less frequent. Mr. S. G. Cummings found one in the gable of a ruined cottage, Mr. G. A. B. Dewar has recorded one on a projecting beam under the eaves of a house; inside sheds (L. R. W. Loyd and N. F. Ticehurst); house front behind advertizing letters (*Birds of The Isle of Man*, p. 3), etc. Cf. summary in *Brit. B.*, VII., p. 74.—F.C.R.J.]

CLUTCHES OF DWARF EGGS OF SONG-THRUSH.

As it appears from Mr. Jourdain's note (*antea*, p. 50) that clutches of dwarf eggs are but very rarely met with, it may be worth putting on record the two following clutches of Song-Thrush (*Turdus ph. clarkei*). They were both found in the same brickyard at Clayhythe, near Cambridge, and the eggs, except in size, were perfectly normal. The first, of five eggs, was found on May 8th, 1894, and two of the eggs measure 20.5 by 17.1 and 21.75 by 17.1 mm.; the other three were perfectly uniform in size with these two, but I have not got their measurements. The second clutch, of four eggs, was found on May 10th, 1902, and these measure 22 by 17.75 22.5 by 17.9, 22.5 by 18.25 and 23.4 by 18 mm. The average of normal eggs as given in the *Practical Handbook* is 30.7 by 22.8 mm.

N. F. TICEHURST.

MULTIPLE NEST-BUILDING BY BLACKBIRD.

At Coombe End, Whitchurch, Oxfordshire, the residence of Lady Godlee, there are three ladders under cover, placed

against a wall in the stable-yard. Between the rungs of one of these a Blackbird (*Turdus m. merula*) has built this summer (1925) nine nests and laid the foundation of a tenth. Six of these are completed and lined and three others are well advanced, but the building seems to have ceased now. In none of the nests has any egg been laid and I understand only one Blackbird has been noticed at work. The whole series



SERIES OF NESTS BUILT BY BLACKBIRD.

of nests appears to be interwoven between the rungs so that one nest could not be removed without disturbing and disarranging the adjoining ones. The photograph shows six of the nests. JOHN L. HAWKINS.

[Cf. *Br. B.*, XIII., p. 108. Multiple nest-building has also been recorded of the Chaffinch (Vol. IV., p. 367), Redbreast (V., p. 132), Song-Thrush (XII., p. 68) and Redstart (XII., p. 68).—F.C.R.J.]

CUCKOO ENTERING NESTING-BOX AND TWO CUCKOOS LAYING IN SAME NEST.

THE nest of a Pied Wagtail (*Motacilla a. yarrellii*) was built in a nesting-box hanging on the wall of a garden in South Essex, and when first noticed (on May 30th, 1925) contained two of the Wagtail's eggs. On May 31st it contained three. By the morning of June 1st four eggs had been deposited by the Wagtail, and about 4.30 p.m. the same day a Cuckoo's egg was added, the latter being removed by the gardener the same evening. On the morning of June 2nd the nest contained five Wagtail's eggs, but between 2 and 4 p.m. a second Cuckoo's egg, of an entirely different type and obviously laid by a different bird, was deposited. On June 3rd the Wagtail laid its sixth egg, and when I inspected the nest on June 13th it still contained the six Wagtail's eggs in addition to the one laid by the second Cuckoo. It is of interest to note that neither Cuckoo removed any of the fosterer's eggs.

On the date last mentioned I took the measurements of the nesting-box, and was astonished to find that the entrance hole was only $2\frac{1}{8}$ in. by $1\frac{9}{16}$ in. The outside measurements of the box were $7\frac{1}{2}$ in. by 5 in. by $4\frac{1}{2}$ in., and the wood of which the box was made was $\frac{1}{2}$ in. thick. There is no evidence as to the behaviour of the second Cuckoo, but there is no doubt whatever that the first entered the box to lay, as the gardener (who is an experienced naturalist) saw the bird's head protruding from the entrance hole, and shortly afterwards—to use his own expression—saw it squeeze out and fly away.

It is of added interest to note that, in my opinion, the egg laid by the first Cuckoo was by the same bird responsible for the egg recorded by me for April 26th last year (Vol. XVIII., p. 56), although in this case the nest selected was a Hedge-Sparrow's. The two sites are less than 100 yards apart.

Although I am aware that there are several cases on record of two Cuckoos using the same nest, it may be worth while adding that on June 17th I found the nest of a Hedge-Sparrow (*Prunella m. occidentalis*) containing two Cuckoos' eggs of entirely different types, and obviously laid by different Cuckoos. The larger egg is of the greyish "Wagtail" type, and the smaller a reddish egg very like a certain type of Tree-Pipit's. Two Hedge-Sparrow's eggs completed the set.

F. HOWARD LANCUM.

EARLY LAYING OF CUCKOO IN PERTHSHIRE.

IN *British Birds*, Vol. XVIII., p. 78, there are collected several records dealing with instances of Cuckoos (*Cuculus c. canorus*) laying early in the year in various parts of England, and on the following page Mr. Stanley Pershouse cited two cases in the county of Kirkcudbright. There do not appear to be any instances for the more northerly counties of Scotland, and I therefore put the following on record.

On May 15th, 1925, at St. Fillans (central Perthshire), a friend (Mr. E. A. Armstrong) told me he had that day found a Hedge-Sparrow's nest with an egg, which, from his description, I had no doubt was that of a Cuckoo. The following day we visited the nest, which was in a quick-set hedge by a public highway, and found the young Cuckoo and two Hedge-Sparrows hatched. With an incubation period of 12-13 days this makes the date of laying the 3rd-4th of May, which appears early for this part.

CHARLES G. CONNELL.

SHORT-EARED OWL BREEDING IN YORKSHIRE.

A SHORT-EARED Owl (*Asio f. flammeus*) nested on the Whitby Moors in May, 1925, three young being successfully reared

out of four eggs laid ; the other egg being addled. In the nest when found were four shrew mice and one short-tailed field-vole, all untouched, and on another occasion the feathers of a Common Snipe (*Capella gallinago*). W. S. MEDLICOTT.

OSPREY IN YORKSHIRE.

AN Osprey (*Pandion haliaetus*) visited my farm at Goathland on May 9th, 1925. It stayed two hours, 9.30-11.30 a.m., then went north. It came within fifty feet of me, and spent the time soaring over the becks in small circles, apparently looking for fish. It was much mobbed by Starlings.

W. S. MEDLICOTT.

WHITE-FRONTED GOOSE IN FULL MOULT IN IRELAND IN JUNE.

ON June 18th, 1925, Mrs. Laverton, residing on a yacht anchored between Horse Island and the shore of the south end of lower (*i.e.* northern) Lough Erne, County Fermanagh, saw two wild Geese swim past. While she prepared to investigate the phenomenon, Mr. Quigley of Horse Island went after the Geese in a boat. The birds dived freely, but one being cornered took to the shore and was caught in bushes. It was quite unable to fly owing to its moulted condition.

The bird was kept with great attention inside a small enclosure only netted a yard high. The companion has since been seen more than once, but there is a big rush bed on a neighbouring island where it could be secure from observation. In a short time the bird fed freely in presence of observers, especially in the evening. It was first described and then sent on June 29th to Mr. Witherby, who will further comment on the case. I may note that local people say a flock of Geese lit near an island on May 15th.

Wild Geese have no feeding-grounds near here nor do I know of any White-Fronted Geese in captivity, though tamed Grey Lag-Geese have been for years at the Earl of Belmore's, seven miles away.

J. P. BURKITT.

[This bird was sent to me alive, and after examining it I presented it on behalf of Mr. Quigley to the London Zoological Society. The bird was a White-fronted Goose (*Anser a. albifrons*) evidently in its first summer (*i.e.* hatched in 1924) since it had a small amount of white on the fore-head, few black feathers on the under-parts and its wing-coverts had narrower and more rounded tips than those of the adult. The bill was rather pale orange-yellow with a pinkish cutting edge and the nail was marked with black at the tip. There was a good deal of moult all over the body, but the tail-

feathers were not moulting, although the upper tail-coverts were. All the primaries and secondaries were of even growth, about a quarter their full length and all with sheaths, showing that they had all dropped at the same time or nearly so. The greater coverts and the feathers of the bastard-wing were all absent. The median coverts had two gaps of three or four feathers each and probably they were about to be all dropped, but in the lesser coverts new feathers were growing here and there and evidently those would not be shed together.

The fact that two White-fronted Geese remained in Ireland and moulted at this time of year is, I think, of considerable interest, and I am greatly indebted to Mr. Burkitt and Mr. Quigley for sending the bird for my examination.—H.F.W.]

MANX SHEARWATERS LAYING IN THE OPEN IN SCILLY.

ON the island of the Gugh, Isles of Scilly, part of which has recently been cultivated, several eggs of the Manx Shearwater (*Puffinus p. puffinus*) have, this year, been found deposited in the open and on ground devoid of any cover but very short grass.

In another part of this island there is a colony nesting in the peaty soil, but where these eggs were found the ground is so extremely hard that the birds probably could not burrow into it, so laid their eggs on the bare turf. H. W. ROBINSON.

FLEDGING-PERIOD OF OYSTER-CATCHER.

ON June 13th, 1925, I caught and ringed a nestling Oyster-Catcher (*Hæmatopus o. ostralegus*) whose age was estimated at ten days. It was caught again on July 2nd and was in full juvenile plumage, so that the fledging-period was approximately twenty-nine days. R. H. BROWN.

[Dr. J. M. Dewar has noted (*Br. B.*, XIII., p. 207) that the young Oyster-Catchers are attended and fed by the parents for at least five weeks after hatching. B. Hantzsch estimates the fledging-period at about four weeks.—F.C.R.J.]

LAPWING PERCHING ON TELEGRAPH WIRE.

MY colleague, Mr. E. R. St. A. Davies, reported to me on June 8th, 1925, that as he was cycling to school at Felsted, Essex, he saw a Lapwing (*Vanellus vanellus*) perching on the telegraph wires by the roadside. As he was getting level with it, it fluttered down into the field, so he thought it was damaged and got off his cycle to look at it. On getting over the hedge he was surprised to find that it was all right and had three, at least, young among the peas in the field. I think this occurrence, on the authority of so trustworthy an observer, is worth putting on record. J. H. OWEN.

SPOTTED REDSHANK IN KENT.

ON June 12th, 1925, on the sands at Littlestone, Dungeness, when bird-watching with a friend, Mr. C. H. Payne, we had good views of a pair of Spotted Redshanks (*Tringa erythropus*). We were using $\times 12$ and $\times 9$ binoculars, and a $\times 100$ telescope. We watched the birds, which were in full summer plumage, for half an hour or more. They were silent. J. P. HARDIMAN.

RAPID NEST-BUILDING BY MOOR-HEN.

ON the Mere at Scarborough are pleasure boats which are owned by the Corporation, and let out on hire during the summer months. On the Mere are also a goodly number of Coots, Moor-Hens and other waterfowl. On the night of

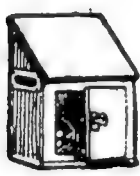


NEST OF MOOR-HEN IN BOAT.

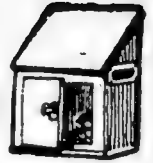
(Photographed by T. N. Roberts.)

Friday, June 12th, 1925, the boat attendant took the boats to their moorings as usual, and on the following morning, June 13th, on bringing the boats to the landing-stage, noticed that a Moor-Hen (*Gallinula ch. chloropus*) had—during the night—built a nest and in it laid an egg in the bow of one of the boats. The photograph shows the bow of boat with the egg and nest.

T. N. ROBERTS.



LETTERS



STATUS OF THE SHOVELER IN LANCASHIRE.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to the request for information about the nesting of the Shoveler (*Spatula clypeata*) in Lancashire (*antea*, p. 55), the following published records should be noted.

So long ago as November, 1917, Mr. T. A. Coward wrote in the *Lanc. & Ches. Naturalist*, p. 245 :—

“ Mr. F. W. Holder informs me that the Shoveler nests at no great distance from Southport and that on April 30th some of the nests were destroyed by floods.”

Again in the same journal in September, 1918, Mr. Coward wrote :—

“ Near Southport a bird nested on the top of a haystack.”
“(F.W.H.).”

These notes were republished in the fourth and fifth *Annual Reports* of the Lanc. & Ches. Fauna Committee.

Formby (where a male Shoveler was seen by Mr. Dooley) and Southport are only half-a-dozen miles apart; evidently the bird has been well established in the district for some time.

Also in *British Birds*, Vol. XVIII., p. 58, I recorded that Shovelers were nesting in plenty in 1923 on a Lancashire moss at the head of Morecambe Bay.

A. W. BOYD.

NORTHWICH, CHESHIRE.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to the note under this heading (*supra*, p. 55), a few pairs of Shovelers have nested regularly in one locality since 1921 and perhaps before. I saw three nests with eggs in 1923. The place is probably known to Lancashire naturalists, from whom further and fuller information might be obtained.

W. J. ASHFORD

THE MIGRATION OF THE WOODCOCK.

To the Editors of BRITISH BIRDS.

SIRS,—The summary of Dr. Schenk's article on this subject is of great interest. I should like to be allowed to refer to one or two points.

First, Dr. Schenk asks British observers for evidence of the Irish-English route, followed, he believes, in autumn. The following observation may be of some interest in this connection. I was staying at the Lizard at the end of December, 1913. An anti-cyclone spread its influence over the British Islands during the last three days of the year, centred, if my memory is not at fault, over Ireland. On the 30th and 31st there were north-east winds with bright sunshine and frost in the shade all day in south-west Cornwall. I believe the frost in Ireland was more severe. On the morning of the 31st the fields above the Lizard lighthouse were covered with flocks of Lapwings (*V. vanellus*) and Golden Plover (*Ch. apricarius*). Flocks were still arriving during the morning and they came over sea from the west. I also put up a Woodcock (*Scolopax rusticola*) from a little stream in a cove a little way to the west of the lighthouse. It is possible that it, too, had come from the west. At the time I thought the strange

direction of the flight of the Plovers must be due to the abnormal weather conditions; no doubt to some degree it was so; but this "weather migration" is easier to understand if the birds were following a regular autumn line of flight.

I suppose one criticism that an English observer is inclined to make of Dr. Schenk's "conclusions" is that they afford no explanation of the great passage of Woodcock across the North Sea in the autumn. If the routes followed are coast lines, why do not all Scandinavian birds keep down the coasts of Denmark, Germany, Holland, Belgium and France? It might be understandable if only those that reached the southern capes of Norway struck out south-west across the sea. But there is plenty of evidence—some, at least, in the case of Woodcock—that many birds leave the continental coast further south and cross the North Sea without being able, at the time of departure, to see the land they are making for. Again, how do birds that have reached the south-west of Ireland know the direction they must take to reach Cornwall? I have myself seen Passerine birds—Wagtails and Finches—flying south across the Bay of Biscay, nearly parallel to the French coast, apparently making a direct flight from Ireland to Spain. It may be that particular species follow fairly well-developed routes. My own observations, so far as they go, tend to show, on the one hand, remarkable fidelity to certain places and routes for migration, and, on the other, an almost endless variety of routes and directions followed by the same species.

It is, I think, rather too convenient and simple to say that birds found migrating off the regular routes are "lost"; though, of course, it may be so. May one suggest that the inherited instinct (if it is an inherited instinct) varies greatly in intensity? That is to say, some birds of a species (*e.g.* Woodcock) may undertake long annual journeys, following without error the routes that have served many generations; others go less far, and with less certainty as to the route followed, some going only rather generally south or west—or even, occasionally, quite in the wrong direction, whilst some may perish far out at sea; whilst yet others never go more than a few miles from their place of birth. This would allow for many gradations between those that migrate with unerring instinct and those that are completely "lost."

H. G. ALEXANDER.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to the interesting article on this subject, Dr. Schenk states on page 41 that a Woodcock with a Heligoland ring of which the number was unfortunately not noted was recovered in Co. Tyrone, Ireland. If Dr. Schenk will turn to pages 44 and 45 of the *Irish Naturalist*, Vol. XXXIII., he will find full particulars of this Woodcock, including the number of the ring, in a note by me. The number was Heligoland 24311, and the bird was ringed on Heligoland on April 29th, 1923. It was recovered at Baronscourt, Co. Tyrone, on December 31st, 1923.

W. H. WORKMAN.



REVIEWS

British Birds. Written and illustrated by Archibald Thorburn, F.Z.S.
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IN this new edition of Mr. Thorburn's well-known work the size is octavo instead of quarto and the plates are entirely different. In the original quarto work some six or so species were grouped on each plate with a background covering the whole surface, while in the present octavo edition each plate has usually two species grouped to make a little picture with a sufficient white margin. Although the figures the birds are rather smaller we certainly like this new arrangement better. On the other hand the colouring does not seem quite so true nor the attitude of the birds always so good as in the first edition. Mr. Thorburn invariably chooses the richest coloured and most perfect adult specimen to depict. This is often idealised to such an extent that the feathers are unnaturally perfect, but the result is a bright and beautiful picture.

It is not perhaps fair to judge the book from the point of view of utility, but nevertheless it may be said that just as beautiful, if not such brilliant, plates could have been painted of birds in juvenile and other little known plumages. Everyone, for instance, knows an adult cock Blackbird, but many beginners have difficulty in distinguishing the hen and Mr. Thorburn's figure of her will not help them. Similarly, everyone knows an adult Robin, but to many the juvenile of even so common a bird is unknown—no figure is here given of it. Two adult Goldfinches are depicted, but what a pity not to have made one of them a young bird. Mr. Thorburn's book would certainly have been far more useful to the general public had it included figures of the commoner birds in their less well-known plumages and omitted, if necessary, some of the great rarities. In any case if the latter are to be included they should be depicted in plumages most likely to be seen in the British Islands and not adult summer males as the Blue-throats, or adult males as the Red-breasted Flycatcher.

British subspecies are barely mentioned, and even such an interesting and distinct bird as the St. Kilda Wren is passed over in a sentence and not figured. To devote a plate to the Wall-Creeper and Alpir Accentor and omit the St. Kilda Wren is certainly not fair to the British avifauna. In nomenclature the author has followed Saunders's *Manual*, now a quarter of a century old, and many of the names will be unknown to the rising generation.

But as a whole this edition of Mr. Thorburn's work is much to be admired. It is well produced and beautifully bound and certainly well worth the published price. It is to be completed in four volumes, the second being promised this autumn and the remaining two in the spring and autumn of 1926.

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REV F. C. R. JOURDAIN, M.A., M.B.O.U., H.F.A.O.U., AND
NORMAN F. TICEHURST, O.B.E., M.A., F.R.C.S., M.B.O.U.

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ON THE NESTING OF THE AVOCET IN THE CAMARGUE.

BY

WILLIAM E. GLEGG.

(PLATE 2.)

THE Avocet (*Recurvirostra avosetta*) is one of the birds of the Camargue which justifies the statements made regarding it by different text-books. Jaubert et Barthélemy-Lapommeraye (*Richesses Ornithologiques du Midi de la France*, 1859, p. 485) state of this species, "elle se reproduit, en assez grand nombre, vers le bas de la Camargue." Dr. Eagle Clarke (*Ibis*, April, 1895) states that he did not find this an abundant species in this district in the spring of 1894, which was a dry season, about seven pairs being found breeding on a small island in the Etang de Consécanière. Dr. Clarke formed the opinion that the bird must be a late breeder in the district as the first eggs were found on May 28th. It will be seen that our experiences do not confirm this. Mr. Ingram (*Field*, September, 1908) was also successful in finding a nesting colony of this beautiful wader on one of the islands on the western half of the Etang du Valcarès. My companion and I were no less successful during our visit to this district during May and June, 1924. The fact that the Avocet should be thus found nesting in the Camargue has raised questions in my mind in regard to other species, as the Pratincole and Black-winged Stilt, which I am especially anxious to find. If the Avocet could be so easily discovered, why should not the species referred to have been found with equal readiness? On the other hand our success with the Gull-billed Tern suggests that the ground may not have been completely explored and that the district may be worth another visit.

Our first view of the Avocet was obtained on May 19th, 1924, when we saw a number on the Etang du Valcarès feeding in association with the Flamingos. On the following day on the islands in this étang, already described in my previous articles on the birds of this locality, we found a large nesting colony of this attractive wader. Thus we have evidence that this species has remained faithful to broadly the same district for thirty years at least. It is impossible to say definitely whether these birds have increased or decreased during this time, but it cannot be denied that they are now quite numerous, even if the colony under consideration should be the only one. If the birds of the Camargue



AVOCET: APPROACHING NEST.
(*Photographed by W. E. Glegg.*)



are subjected to as much molestation as has been suggested, how comes it that a bird with such habits as the Avocet survives in such numbers. Incidentally, the writer may say that nowhere has he been in a locality so deserted by human beings as these islands of the great lagoon. There seems to be no reason why even the Flamingos should not have nested as successfully as other species.

We found very many nests of the Avocet on these two islands, all on the mud below what would be the high-water level in winter. We found none among the vegetation with which these islands are more or less covered. The nests, which varied very much in the amount of material used, contained either three or four eggs. The Avocet proved to be the most difficult subject to photograph of the different species on which I exposed plates. As a result of my observations I do not think that this was the result of timidity. I incline to the opinion that the eggs of this species may be less susceptible to the fierce rays of the sun than the other species. At any rate the Camargue Avocets do not sit as closely. I put up the tent on an Avocet, for the first time on May 22nd, but the owner only twice came to the nest and for very brief periods. I made no attempt to expose plates. I renewed operations on the same nest on the following day, during the course of which the birds paid three brief visits to the nest, and the tent was put on another nest but with no greater success. A statement from *Richesses Ornithologiques du Midi de la France*, p. 485, supports my experiences. The authors, speaking of this species, say "La femelle . . . , et ne les couve pas assidûment ; elle fait, à cet égard, comme la plupart des oiseaux de mer qui laissent au soleil, pendant la plus grande partie de la journée, le soin de les réchauffer et ne reviennent que le soir, à moins que le ciel se couvre et menace d'un orage."

I renewed attentions on the Avocets on May 27th, the tent having been in position from the previous evening. I found one egg chipped and the youngster could be heard calling loudly. The eggs were very muddy. The stage of the incubation made all the difference, for the beautiful wader was soon back to her nest and photography was easy. The long, delicate bill was often open as though the heat of the sun was having some effect and the bird seemed to pant. I renewed my observations on this nest on the following day. One young bird had hatched out and another did so while I was in the tent. The first youngster was rapidly gaining strength and, responding to the call of the parents, which were some



NEST OF THE AVOCET.
(*Photographed by W. E. Glegg.*)



AVOCET: THE BILL WAS OFTEN OPEN AND THE BIRD SEEMED TO PANT.
(*Photographed by W. E. Glegg.*)

distance away, was able to get over the edge of the nest. One of the adults then came close to the nest and led away the young bird. It could be seen that the second youngster was also responding to the call of the parents, so I struck my tent. It is not easy to describe all that one witnesses on such occasions, but I was deeply impressed by the ready response of these newly hatched birds to the voice of their parents; surely this is one of the most wonderful and beautiful provisions of nature.

On May 29th I tried yet another nest, but with no better result than with the first two. It may be well to add that in no case were any of these nests deserted. On one occasion I had five nests under observation from the hide, and, in the



AVOCET: RISING AWAY FROM INTRUDER.

(Photographed by W. E. Glegg.)

case of one pair, both birds were noticed to take part in the incubation duties. One Avocet approached the sitting bird, both chuckled for some time and then the change was effected. Apart from the young birds which I saw hatch out, I saw only one, and yet dozens must have emerged from the egg. I can only suppose that the chicks take to the thick vegetation immediately they have strength. The actions of the adults, which were always about, indicated that young must be in proximity. The attempts of the parents to lead away the intruder are very interesting to watch, the bird will fly just over the mud with the legs stretched downwards. At times the feet come to the ground and the movement develops into a combination of flying and running. My experiences of the Avocet, confined to Holland and the Camargue, are that

it is a bold bird at the nesting ground; but the Dutch birds were bolder than those of France, as I have known one of the former fly straight at me much as a Great Skua will do. The probable reason is that the Dutch birds are much more accustomed to the presence of people than the French.

Dr. Eagle Clarke (*Ibis*, October, 1898) states that this species was still present in its haunts in the delta on September 23rd, 1896. Col. H. W. Madoc permits me to say that, during his visit to the South of France with Mr. T. A. Coward, he saw



AVOCET: FLYING DIRECTLY AT INTRUDER.

(Photographed by W. E. Glegg.)

a single Avocet at the N.W. corner of the Etang du Valcarès, on September 22nd, 1924.

Since the above was written I have made another visit to the Camargue during June, 1925, and further exploration of the islands of the Etang du Valcarès showed that this handsome species is much more numerous than I had imagined. It may be described as a numerous breeder along the southern shores of this étang. Unfortunately, the Avocet makes its nest on the bare mud, which is liable to be covered by the water with a change of wind, and I found many eggs which had been destroyed in this manner.

THE ABSENCE OF "COURTSHIP" IN THE AVOCET.

BY

J. S. HUXLEY.

WHILE on a visit to the island of Texel in March and April, 1924, I had, together with other members of our party, numerous opportunities of watching the Avocet (*Recurvirostra avosetta*) throughout the early part of its reproductive cycle. I was not unnaturally interested to see what form of courtship this exquisite bird might show; and my interest was the keener for the statement made by Jourdain (1912), in Kirkman's *British Bird Book*, to the effect that "very little has been recorded of their courting actions."

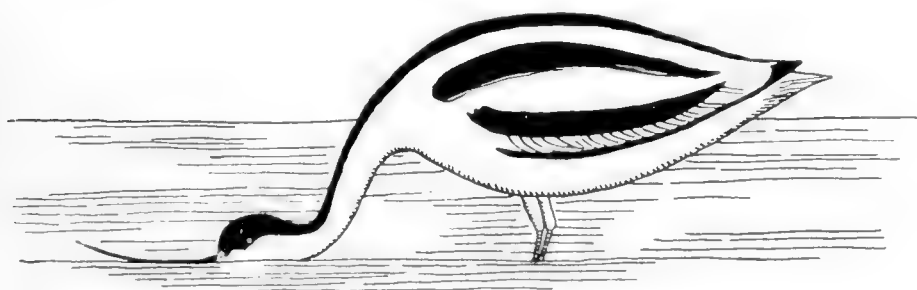
I paid two visits to the island. One, with Dr. van Oordt of Utrecht, from March 28th to 31st; the other, with Dr. T. G. Longstaff, Messrs. J. D. Brown, F. A. Montague and A. N. T. Rankin, from April 12th to 20th; some members of this party stayed on until April 28th.

During the first visit numerous Avocets were to be seen, including about 100 at one of their chief nesting-grounds, Prins Hendrik Polder, as well as scattered birds near Oudeschild and Waalenburg; but none were as yet to be found on another neighbouring nesting-ground at Petters (near Hoorn). Indications of some but not all of the birds being paired up were seen, together with a certain amount of quarrelling. By the time of our second visit the breeding-place at Petters was occupied, and about fifty to sixty birds remained at Prins Hendrik Polder. Egg laying began about April 21st, and one or two full clutches were deposited before the last of the party left. Our observations therefore covered, for some birds, the whole gamut of the pre-incubatory "courtship" period. One or more of us on almost every day devoted some considerable time to watching the birds. At Prins Hendrik Polder the colony were in a peculiarly favourable position for observation from a neighbouring dyke. It may, therefore, be supposed that we have succeeded in filling the gap concerning courtship habits which till now existed in the record of the bird's life history.

We have done so; but the result is wholly unexpected. The Avocet has no courtship! There are no songs or aerial displays; no posturing by the male; no mutual

ceremonies ; no special courtship-notes.* There is some hostility and fighting ; a peculiar action by the female which is a symbol of readiness to pair, followed by an excited action on the part of the male ; and a special post-pairing action by both birds ; but of courtship in any accepted sense none whatever.

The hostility was visible in some birds at the end of March, but more generally noticeable later. It is, however, never pronounced. One bird runs or flutters at another, who runs or flies off. Occasionally both flutter up into the air, but I have never seen actual contact. The species is, indeed, a singularly peaceable one. The sexes are so extremely similar that it is impossible to pronounce on the sex of the quarrelsome birds with certainty † ; but from what I have seen, I should say that they are usually males, and that the usual cause of



INVITATORY ATTITUDE ADOPTED BY THE FEMALE AVOCET.

hostility is the approach of an unmated male to a mated pair. I should not be at all surprised, however, if similar quarrels between mated and unmated females also occurred.

During the latter part of our second visit, however, another piece of sexual behaviour was frequent. The performers, as witnessed by us, were always standing in shallow water close to the nesting-places. One bird, which turned out invariably to be the female, put down her neck (in a rather ugly pose) so that the head was flat on the water. This turned out to be a symbol of readiness for coition (see figure).

* Naumann states that the note he gives as "tliuh" is peculiar to the breeding male ; my experience, however, is that it is given by both sexes, and has no special sexual significance. Jourdain, in Witherby's *Handbook* (1919), states that there is a special note of the male's, given only when on the ground. This escaped us.

† The males average slightly larger than the females, but the largest females are considerably larger than the smallest males (Witherby's *Handbook*). There is a very slight sexual difference in colour during the winter, but none in the breeding-season.

The male almost invariably came up, and usually executed a curious little dance (the female remaining the while in the strange, rigid attitude just mentioned)—running round the hen's stern from one flank to the other, several times, making a good deal of splash in the process. He then consummated the act of pairing; and then there followed, on every occasion witnessed, a remarkable piece of post-nuptial ceremonial. In its usual form it was as follows. The cock jumped down to one side of the hen (so far as observed, always to the left side) with half-spread wings; in so doing, one wing would come to lie over her back, and in this position both birds ran forward together for several yards through the shallow water. The effect was charming, and reminded me forcibly of the little run made by MacHeath and Polly in the "Beggar's Opera" at the refrain "over the hills and far away" in their duet. Usually the hen would stop before the cock, slip from under his wing, and leave him to run a few yards further. Occasionally the cock's wing would not embrace the hen, and the two would run separately side by side; or occasionally the hen would not, or would hardly, run at all. The run is noted as "apparently part of the ritual of pairing" by Jourdain (*loc. cit.*); but he states that the female runs after the male, which is in my experience unusual.

Coition was never seen except where prefaced by the special pose on the part of the hen, nor was any ceremonial or display-action of the cock's seen except (1) on response to this, and (2) after coition itself.

* * * * *

This is undoubtedly a very remarkable state of affairs. It was emphasized for us by the fact that we were chiefly engaged on Texel in the study of the courtships of other waders (*Limicolæ*), and notably of the Black-tailed Godwit (*Limosa limosa*) and Oystercatcher (*Hæmatopus ostralegus*) (see forthcoming papers now in press in the *Ibis*). Besides these, the Lapwing (*Vanellus vanellus*), Redshank (*Tringa totanus*), Ruff (*Philomachus pugnax*), Kentish Plover (*Charadrius alexandrinus*) and Ringed Plover (*Ch. hiaticula*) were all common. Every one of these species was showing a characteristic and elaborate form of courtship. With the exception of the Ruff, in all the species mentioned, the male not only goes through regular courtship posturings on the ground, but in addition has a special aerial display with song or special call (although this, in the Oystercatcher, is much reduced in importance). Courtship exists, indeed, on the

whole in a highly-developed form in the group; and, what is more, the type of courtship is as much a specific character as that of the plumage or the skeleton.

How are we to account for the absence of courtship in the Avocet? I do not think it is possible to answer the question except in a speculative and rather vague manner, by reference to what for a better term we must call "temperament." The most various observers of birds in nature have been struck with the difference in temperament between different species. However, the term, and the type of thought of which it is the expression, have hardly found their way into the literature and ideas of general biology (as opposed to ornithology)—with a few honourable exceptions, of which J. D. Watson, the "behaviourist," in his studies of the Sooty and Noddy Terns (1907), may be especially cited. He found that these two closely-related species, both nesting on the same islet, were extremely different as regards temperament, the one being for instance sluggish, placid, and on the whole peaceable, the other restless, noisy and quarrelsome. Nor could he relate this difference to any cause residing in different mode of life. Cf. also E. Howard ('07-'14) Vol. 2, p. 80. "Extravagant antics . . . are surely sufficient reason for assigning to the actor a different level in an emotional state from one whose movements attract but little attention . . ." etc.

The Avocet possesses, as already indicated, a very placid "temperament." It is a colonial nester, and very little quarrelsome even as regards the limited nesting-areas within the colony. Its fights due to jealousy are, as above stated, never very serious or whole-hearted. It is, at this time of its life-history, not at all noisy and not shy. It is adapted rather narrowly to a very special method of obtaining food; and in places where this mode of existence is possible, there appear to be more than enough available nesting-sites; thus a violent "territorial instinct" on the part of the males is not required.

It would thus seem that, with this temperament, the state of emotional tension accompanying the early breeding-season does not normally overflow into action, except as hostility to intruders of the same sex, and even then not very actively. The intrinsic sexual rhythms of the female thus come directly into play. The symbolization of readiness to pair by an attitude similar to that adopted in pairing is interesting and found in other birds—prominently, *e.g.*, in the Crested Grebe (Huxley, 1914). This appears to be the only thing which rouses the

male to the higher levels of excitement, as shown by his strange running from side to side before the act. The post-nuptial run is very curious, but does not stand alone, a number of diverse species also showing some sort of ceremonial *post coitum*.

This interpretation, if true, would clearly support the view that "courtship" displays arise immediately from the excited state of the unsatisfied male bird (or of both sexes in species with mutual displays), as urged, I believe rightly, by Howard, E. Selous and various other writers. It might be supposed that it was highly antagonistic to any view claiming a biological function for "courtship." This, however, need not be so. The physiological stimulus to present displays and the evolutionary origin of displays in general in the past may rightly be sought in the bird's excited state. But this gives no explanation of the details of elaborate courtships such as those, *e.g.* of Ruffed Grouse or Grebe, nor of the origin of features of structure and colour which are displayed solely in courtship. For the origin of these, a modified form of the sexual selection theory is necessary, and does not meet with any formidable difficulties. Thus the biologically accidental and the biologically significant are interwoven in courtship, and in some cases the one, in others the other may be predominant.

It is clear from what has been said, and from the further fact of its showing a negligible seasonal change, that the colour of the Avocet cannot be supposed to have any particular epigamic significance. As the bird is colonial and does not appear to have many natural enemies, the colour may be presumed to be in general recognitional, or possibly without biological significance. With reference to the great similarity between cock and hen, it is worth noting that both share equally in incubation and care of the young.

One final point deserves mention. The Avocet is noted by all observers as being very solicitous for its eggs and young. Both birds fly overhead calling when the nest is approached; and after the young are hatched, danger to these is met by the most elaborate "injury-feigning," again on the part of both sexes (Jourdain, *loc. cit.*, Howard, *op. cit.*, Vol. I, p. 32, etc.). Howard lays considerable stress upon the resemblance between the attitudes adopted during "injury-feigning" and those seen in sexual excitement. My experience with the Purple Sandpiper in Spitsbergen led me to doubt the validity of the generalization for that species; and in the Avocet it is certainly not true, since these attitudes described

during the "injury-feigning" have no resemblance to those seen in relation to coition, and there are no ordinary courtship actions. Furthermore, on Howard's own showing, the resemblance between the two types of actions is usually not marked within one species; and almost all the examples he gives are between the "injury-feigning" of one species and the display of another, and vice versa. In the Lesser Whitethroat the two types of action are fairly similar, but still not identical.

The same facts as those mentioned above for display appear to hold good also for "injury-feigning"—*viz.*, that in origin it was a direct expression of great excitement, though in some species it appears to remain on this "accidental" level, but that in others it has come to have definite biological significance and been elaborated by natural selection to a new level of complexity, *e.g.*, the Eider Duck usually nests on small islands on which there are no foxes. Nevertheless, when flushed from the nest, the duck almost invariably shuffles away on foot with wings drooped. It is a singularly poor "feigning of injury" and would hardly deceive a fox—though a mainland-nesting bird has been seen thus shuffling along with a fox in pursuit. However, when foxes reach the islands across the ice in winter and are present when the Eiders return to breed, the results are disastrous, the island being finally almost or quite abandoned by the birds. The chief existing enemies of the eggs are the Skuas and larger Gulls; and these do not attack the adult duck, and so could not very well be lured away from the nest by the performance. On the other hand the Purple Sandpiper which nests on the mainland tundra has an "injury-feigning" performance which must be hard to beat for elaboration. The bird gives the impression of being seriously damaged; it may continue to lure the intruder away for several hundred yards; and if the intruder does not follow, the bird may come back to within a few yards or even feet and repeat the performance. Whereas in the first case the present significance (biologically) seems nil (although it is conceivable that at some earlier time, if the birds nested in other surroundings, it might have been of value), in the second there is no doubt in my mind of its real importance in luring enemies away from the eggs or young.

To sum up, we may say (1) that "injury feigning" is never deliberate feigning, (2) that the actions in many cases, especially the less elaborate ones, have very little resemblance to those of an injured bird. *Faute de mieux*, however, I continue to use the term for the present, but in inverted commas.

I would also hazard the opinion that some species of birds have more varied channels than others for the expression of emotion ; and that in a number of species, consequently, the channels for expressing sexual emotion, anger, and solicitude for the young are identical or similar ;* while in others they are quite dissimilar.

It is in any event remarkable that in regard to " injury-feigning " the Avocet is one of the most spectacular of birds, while its courtship is so negligible. It would be interesting to know whether this is correlated with a special exposure of the young to danger from natural enemies.

In regard to food, Dr. G. J. van Oordt informs me that he believes a staple of the diet of the Avocet to consist of *Corophium longicorne*, a crustacean which lives in holes in the mud, from which protude its long antennæ. If so, perhaps the peculiar form of the bill is largely to detect and seize these tell-tale members.

Dr. T. G. Longstaff tells me that he has repeatedly seen them swing their bill in their characteristic scythe-fashion only just below the surface of water several inches deep, as well as deeper, just over the mud. This would capture quite different organisms.

In conclusion, I would like to thank all the members of the party for their kindness in putting their experiences and notes at my disposal, and my various Dutch friends, and in particular Dr. van Oordt and Dr. van Tienhoven of the Dutch Society for the Preservation of Natural Monuments, for their kindness and the numerous facilities so readily accorded us.

* For jealousy and sexual emotion, they appear to be identical in the Oystercatcher. See evidence in paper on that species now in press for the *Ibis*.

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NOTES

VARIETY OF COLORATION OF EGGS OF TREE-SPARROW.

FOR many years the majority of my bird nesting-boxes have been occupied by the Tree-Sparrow (*Passer m. montianus*), and the variety of colouring of the eggs of this bird is remarkable. Perhaps the average colour of the eggs may be described as rufous-brown with specks and streaks of a darker shade, but in every clutch there is invariably one egg of grey-white or very light-brown colour, speckled, and streaked. This summer (1925) I have had one whole clutch of five eggs almost pure white, which is, I believe, very unusual, and another clutch of the same number of eggs of a very dark reddish-brown with one, as usual, much lighter than the others.

JOHN R. B. MASEFIELD.

PIED WAGTAIL LAYING FOUR TIMES IN THE SAME NEST.

IN the latter part of May, 1925, a birds-nesting lad showed me two sets of eggs (a "four" and a "five") of the Pied Wagtail (*Motacilla alba yarrellii*), which he had taken—with an interval between, of course, and from the same nest in an ivy-covered wall in Dorsetshire. On going to the site I was surprised to see the bird leave the nest, which, on examination, contained another clutch of four eggs. These I told the lad to leave untouched, and allow the bird to hatch and rear her young without further disturbance. I was unable to visit the nest again until a month later, when I heard that the young had hatched safely and left the nest. I again examined the nest, which now held two fresh Wagtails' eggs and a Cuckoo's; the latter I took and unfortunately the Wagtail deserted. There is no doubt that all the four clutches, which were of the same type, were laid by the same bird.

W. J. ASHFORD.

STATUS OF MARSH- AND WILLOW-TIT IN DENBIGHSHIRE AND PEMBROKESHIRE.

THE *Practical Handbook* under British Marsh-Tit, "distribution" (Vol. I., p. 243), states: "In northern parts of North Wales probably only accidental"; however, I have no hesitation in stating that this species breeds in the Vale of Clwyd.

North Denbighshire. Although I have not obtained specimens of the birds themselves, I have found nests as follows : (A) Behind a piece of loose bark of a growing oak tree ; (B) in a wall of loosely put together limestone. I have found no trace of the bird-made nesting holes of the Willow-Tit (*Parus atricapillus kleinschmidti*) in Denbighshire. As regards Pembrokeshire, I have no hesitation in stating that both species breed. My friend, Mr. James Wynne, late of Pembroke, gave me his egg-collection some years ago and the data as regards some sets of Marsh-Tit eggs appears to me conclusive. All eggs were from nests in natural holes of solid, growing trees—all near Pembroke. As regards Willow-Tit, I once found a nest, which I attribute to this species, near Haverfordwest. It was in an extremely rotten three-foot high willow stump standing on swampy ground. The entrance hole was neat and round and obviously bird-made. I did not examine the nest materials because it contained young, and I also did not realise the particular interest of my find.

W. M. CONGREVE.

[It will be noted that the above notes are based on observations on nesting habits and breeding places and not on records of the birds themselves. The theory that the Willow-Tit is responsible for the Woodpecker-like holes cut out in soft wood by the birds themselves has, however, been recently confirmed by examination of birds caught on the nest.—EDS.]

WILLOW-TIT BREEDING IN CUMBERLAND.

IN view of the absence of any breeding records of the Willow-Tit (*Parus atricapillus kleinschmidti*) for Cumberland, the following note may be of interest.

I was asked by Major W. M. Congreve in the spring of 1924, to endeavour to work out the status of this species and the Marsh-Tit (*P. palustris dresseri*) in the neighbourhood of Carlisle, but did not locate a nest of either species until this year, when I had two nests of the Willow-Tit under close observation. The first was situated in a rotten willow tree, the nesting-hole being about two feet from the ground, the entrance hole about the size of half-a-crown, the depth of the hole about six inches, with a nest cavity at the bottom. The excavated chips were lying at the foot of the tree. The nest was composed of rabbit fur, a small quantity of willow-down, wood chips, and narrow strips of birch-bark up to two inches in length with a *complete* absence of moss. This nest contained eight eggs on May 3rd ; the hen was then sitting and I caught and carefully examined her. The male was

on a tree close at hand, the light buff edge of his secondaries being very conspicuous.

The second nest was in a rotten birch, the nesting-hole being about 18 inches from the ground and in size and depth similar to the first one; the excavated chips were lying on the ground below the hole. The nest was composed of the same materials as the first, with again a complete absence of moss.

I visited this nest on various occasions, and the time from the commencement of excavation until the final egg was laid was thirty days. During the laying period the eggs were covered when the hen was not on the nest.

This nest contained eight eggs on May 9th; the hen was caught and sent to Mr. H. F. Witherby, who pronounced it to be an undoubted Willow-Tit.

As to the presence of the Marsh-Tit in Cumberland, I can at present produce no evidence. T. L. JOHNSTON.

[I have a specimen of the Marsh-Tit from Alston, Cumberland, taken by Mr. G. Bolam in January, 1913.—H.F.W.]

CHIFFCHAFF SINGING ON THE WING.

On April 11th, 1925, in Wormley Wood, Herts, I saw a Chiffchaff (*Phylloscopus c. collybita*) chasing another one on the wing. At the same time one of them was singing. SYDNEY G. POOCK.

MULTIPLE NEST-BUILDING BY BLACKBIRD.

With reference to Mr. Hawkins's note (*antea*, p. 72) on multiple nest-building by the Blackbird (*Turdus m. merula*), in April, 1925, I found a similar instance on the ledge running round the interior of a cow-shed near Dumfries. Six nests were completely finished and lined, while a platform of moss and other building substances extended for about two feet beyond the sixth nest.

In one of them the Blackbird (which had evidently built all the six nests) brought out a family of four nestlings, which my brother and I ringed when they were about to fly.

WALTER DUNCAN.

[The habit of multiple nest-building has now been recorded in the case of five species, *viz.* Blackbird, Song-Thrush, Robin, Redstart and Chaffinch, but an analysis of the records shows that none of these cases have occurred when the birds have been breeding under purely natural conditions, but invariably when in contact with objects constructed by man, such as the rungs of a ladder, or the spaces between the rafters inside a shed. It is evident that the intelligence of the bird is incapable of coping with the situation, and that they fail to distinguish between sites close at hand which are exactly similar in

character. Even in meadow and moorland nest-sites many birds take advantage of some prominent object as a guide to the nesting-place.—F.C.R.J.]

SOME RESULTS AND METHODS OF MARKING WHEATEARS.

It may be worth putting on record that I have had further evidence of the return of a Wheatear (*Enanthe æ. ænanthe*) to the place where it was hatched, and also a curious instance of its deserting both nest and territory. The facts are as follows:—Ring A 2,918 was put on a nestling Wheatear near Seaford, Sussex, on May 18th, 1923. The same bird, a female, was caught on May 17th, 1925, sitting on eggs half a mile from where she was hatched. She deserted the nest and on June 3rd, 1925, was caught again on a fresh nest two miles away. This time she did not desert, and from the great difference in the size of the nestlings, when I went to ring them, I should say that she started incubation after the first or second egg was laid.

I should like to suggest that of all the smaller summer migrants the Wheatear is one of the most suitable for an intensive study by the marking method, for one is not likely to mix up the parent birds of two different nests as is possible with Swallows and more than probable with House-Martins. Then again, so far as my experience goes, and I have ringed 275 Wheatears, of which 10 per cent. were adults, they never desert if caught on young and seldom if caught on eggs.

The easiest holes in which to catch the adults are those that go in about a foot, for the bird when in the hole will get out of reach if it can (even so, I have caught one or two simply by leaving an open palm for it to settle on). The female should be caught on the young when the latter are one or two days old, for then she covers them most of the time. The males are a more difficult problem; probably they could be caught with a spring net trap when the young are several days old.

Summarizing the results already published in *British Birds*, and including the case mentioned above, three nestlings and one adult marked in Lancashire and Sussex returned to the same place the following year or the year after (*vide* Vol. XII., p. 155; Vol. X., p. 61; Vol. XVIII., p. 187). Two nestlings, one marked in Lancashire, the other in Yorkshire, were recovered the following September near the River Gironde, S.W. France (*vide* Vol. VII., p. 11; Vol. XIX., p. 14). A nestling marked at Seaford, Sussex, was found six weeks later on the north coast of Kent (*vide* Vol. XVII., p. 79).

J. F. THOMAS.

INCUBATION- AND FLEDGING-PERIOD OF THE
HOUSE-MARTIN.

THE incubation-period of the House-Martin (*Delichon u. urbica*) is estimated by Mr. W. Evans as fifteen to sixteen days and by Mr. R. H. Brown as fourteen to fifteen days, the fledging-period at nineteen to twenty-one days (R. H. Brown). The combined totals therefore range from thirty-three to thirty-seven days.

On June 11th, 1925, a pair of House-Martins appeared in the morning at an old nest under the verandah of my house. By the evening of that day appreciable progress had been made in building. By June 18th the nest was finished and I could feel an egg, but without damage to the entrance it was not possible to ascertain whether others had been laid, as I suspected.

The young remained in the nest till the morning of August 7th, when they all left, and since that time the nest has not been revisited.

On the supposition that only one egg had been laid on June 18th, the full clutch (four) would have been completed on the 21st, and the combined incubation- and fledging-periods extended to forty-seven days, ten days longer than the maximum as previously estimated. As the nest is a solitary one and the dates were noted at the time no mistake is possible, but we all noticed that the young appeared to remain in the nest for an unusually long time. F. C. R. JOURDAIN.

GREEN WOODPECKER IN AYRSHIRE.

WHILST walking up the wooded sides of the Girvan Water in the policies of Blairquhan on July 19th, 1925, I heard the unmistakable cry of the Green Woodpecker (*Picus viridis*).

Had I been anywhere in the south, where this bird is well known to me, the laughing cry would have passed without note, and it is a pity that there was no ornithologist with me at the time to corroborate. The Green Woodpecker, of course, is rare in south-west Scotland. The Girvan valley, however, is eminently suitable for the tastes of the species.

E. RICHMOND PATON.

WRYNECKS IN S. DEVON.

ON June 17th, 1925, I found, for the first time, one or two pairs of Wrynecks (*Jynx t. torquilla*)—possibly more—at Branscombe, between Beer and Sidmouth, S. Devon.

It has always been regarded as a rare bird, even on migration, anywhere in south Devon. Capt. L. R. W. Loyd told

me that it was a new bird to Branscombe, and the records of breeding in Devon are very few and far between.

M. STUART CURTLER.

YOUNG CUCKOO FED BY SEVERAL BIRDS.

A YOUNG Cuckoo (*Cuculus c. canorus*), which can fly well, has, during the past week (July 21st, 1925) in my garden at Hawkhurst, Kent, been assiduously fed by two Pied Wagtails (*Motacilla a. yarrellii*) and two Hedge-Sparrows (*Prunella m. occidentalis*), and on occasions by a fifth bird, which I have not seen, but from a description appears to have been a Blue Tit.

Often while a Hedge-Sparrow is feeding the Cuckoo the Wagtail stands by and immediately after feeds it too and *vice versa*. Once while the Hedge-Sparrow was feeding it the Wagtail jumped on the Cuckoo's back and the moment the other (the Hedge-Sparrow) issued its ration, stood on the head of the Cuckoo and bent over and did the same.

I do not know which are the rightful foster parents in this case.

A. HARDCASTLE.

FOOD OF TAWNY OWL.

WITH reference to my note on the Tawny Owl (*Strix aluco sylvatica*) preying on a Little Grebe (Vol. XVII., p. 250), I should like to report that the young Tawny Owls this year have dropped beneath the tree where they are perched remains of the following animals, besides quantities of pellets of mouse fur and beetles' wings: Water rat; brown rat; young Pheasants, twice, one bird about a fortnight old, the other, a fortnight later, about a month old, both half eaten; feathers of young Jackdaw; feathers of Great Spotted Woodpecker, young Sparrows and a young Starling.

C. F. D. SPERLING.

LARGE CLUTCH OF BARN-OWLS' EGGS.

ON May 5th, 1925, I found the nest of a Barn-Owl (*Tyto a. alba*) under the floor-boards of a ruined house in Lode Fen, Cambridgeshire. It was ten feet from the hole from which the old birds escaped, and contained two newly hatched young ones, and two eggs, one of which was chipping. By May 26th, when I next visited the nest, the young had disappeared. I searched the house for a second nest as the two old birds were still about, but I was unsuccessful. On July 2nd I again explored the house, and I found a second nest containing two newly hatched young ones and seven

eggs; there had been no eggs here before, as it was an open site on the floor of the attic. I never saw more than two birds, and I do not think this was the product of two hen birds. I believe, from subsequent observation, that the eggs were laid at intervals of four days. G. W. THOMPSON.

[Although the ordinary clutch of Barn-Owl ranges from four to six, there are three recorded instances of clutches of nine; three of ten and two of eleven. Some of these cases will be found recorded with details in Vol. VII., p. 18.—F.C.R.J.]

KESTREL AND HOUSE-SPARROW USING THE SAME NEST.

ON May 7th, 1925, I found three eggs of a Kestrel (*Falco t. tinnunculus*) in a recently renovated Magpie's nest in Cambridgeshire. On June 5th there were five eggs, three of which were chipping. In the side of the dome was the nest of a House-Sparrow (*Passer d. domesticus*) with three eggs, built so that the back of the nest, which was small for a Sparrow's, could actually be touched from the inside (just where the top of the mud lining joined the dome). There was a cock Sparrow hopping on the dome.

On June 19th I had almost climbed to the nest, which was 45 feet up in an elm, when I saw the cock Sparrow hopping about on the dome, and regarding the five young Kestrels, now thirteen days old, with interest rather than fear. I expected to find the three eggs still in the Sparrow's nest, which was intact, but they had been removed, whether by a boy or not I cannot say.

It is to be noticed that the nest was built and the eggs laid actually while the hen Kestrel was sitting on her own eggs, within less than a foot. G. W. THOMPSON.

[It is not very unusual for House-Sparrows (and occasionally also Tree-Sparrows) to make use of Magpies' nests as breeding-places in England, but it must be very unusual to find a Kestrel and a Sparrow incubating simultaneously. In Spain the Spanish Sparrow (*P. hispaniolensis*) frequently breeds in occupied nests of the Black Kite and the Stork.—F.C.R.J.]

GREAT NORTHERN DIVERS OFF WEST COAST OF IRELAND IN JULY.

ALTHOUGH the Great Northern Diver (*Colymbus immer*) has been met with off the coast of Ireland on more than one occasion in July, the following occurrence is worth recording.

On July 15th, 1925, I observed two large Divers in Clew

Bay, co. Mayo, at some distance. Closer examination revealed four birds, and with the aid of binoculars they were seen to be Great Northern Divers. Three of the birds appeared to be in full breeding plumage whilst the fourth was in plumage similar to first winter. They moved about in pairs and while watching them, the pair, of which both birds were in breeding plumage, swam nearer inshore. I now noticed that the sides of the head and neck of each of these birds were somewhat mottled, which was explained by the presence of grey feathers intermixed with the dark ones, this being due perhaps to an early assumption of winter plumage.

G. R. HUMPHREYS.

BREEDING OF THE CURLEW IN OXFORDSHIRE.

FOR some years past Curlew (*Numenius a. arquata*) have been observed in spring at Otmoor, a low lying expanse of rough pasture about five miles north-east of Oxford. Thus, on April 28th, 1921, the calls of a pair were heard here by Mr. B. W. Tucker, Mr. C. J. Pring and myself. In 1923, Mr. J. F. Madden recorded a pair on March 17th and Mr. R. J. Clough met with one on May 26th, 1924. (See *Report of the Oxf. Ornith. Society*, 1915-1922 and 1923-1924.) During the present season Curlew have been reported from Otmoor by Messrs. Clough, Dobson and Sellar on numerous occasions from April 27th onward, and on June 8th, 1925, accompanied by Mr. R. Dobson, I paid a visit to the ground where we had heard the birds before. They were calling excitedly and one bird was observed to settle once or twice at a spot some 200 yards distant. Walking directly towards it we came within a yard or two of the nest, which contained a nestling still quite wet and the remains of the shells of two eggs. Another nestling, fully dried, was crouching on the ground among the long grass about 2 ft. 6 in. away. We satisfied ourselves that at least three Curlew, probably four, were present. This is the first recorded instance of the nesting of the Curlew in Oxfordshire, the nearest known breeding places being in Wilts, Hants and Surrey.

F. C. R. JOURDAIN.

POMATORHINE SKUAS IN CARNARVONSHIRE.

IT may be worth recording that on May 31st, 1925, after several days of high winds from S. and W., nine Pomathorhine Skuas (*Stercorarius pomatorhinus*) came close in to the shore at Criccieth, N. Wales.

The species was new to me, but the distinctive tail struck one immediately. I was able to look at the birds both with binoculars and telescope as they came to rest on the sea. I believe I am correct in saying they were all adults and of the light variety, but the sea was very rough at the time and observation somewhat difficult in consequence.

R. M. GARNETT.

LETTER.

CONCERNING THE ROBIN.

To the Editors of BRITISH BIRDS.

SIRS,—Mr. J. P. Burkitt in his series of articles on "A Study of the Robin by means of Marked Birds" (Vol. XVII., p. 294, Vol. XVIII., pp. 97 and 250) does not appear to refer to the peculiar sounds uttered by either bird or both of a pair of birds when one is feeding the other.

This year (1925) I have been paying particular attention to the Robin (*Erithacus rubecula melophilus*) and have had a number of pairs under observation. For several weeks this spring I noticed that a particular area of a wood was occupied by a pair of Robins (from the behaviour of the birds I concluded that it was the same pair all along, although I have no proof of this) and I was surprised at the apparent delay in commencing nesting operations (*v.* Vol. XVIII., p. 102). Whenever I saw the birds they were busy hunting for food for themselves, and frequently one of them, presumably the cock, would fly to the other with a morsel of food (*v.* Vol. XVIII., p. 256). Immediately before placing the food in the other bird's bill a peculiar sound was uttered (which may be likened to that of a human kiss). It would be interesting to know (1) whether the sound is uttered by both birds, or by the cock only, or hen only; (2) whether other species of birds utter the sound under similar circumstances, or whether it is peculiar to the Robin.

SYDNEY G. POOCK.

REVIEW.

Notes on the Birds of Cley, Norfolk. By the late H. N. Pashley. Being Notes on the Bird Life of Cley extracted from Diaries between 1887 and 1924, with a List of the Birds and a Chapter of Reminiscences. 8vo. (H. F. & G. Witherby.) 7s. 6d. net.

A REALLY original book on birds is exceptional nowadays, but this little volume of jottings, from the pen of one who had almost unrivalled opportunity of studying Norfolk bird-life during the past forty years, is something quite out of the ordinary.

The book is divided into four parts. In an excellent "foreword" Dr. B. B. Riviere has well caught the spirit of the old naturalist and his book. He is, however, mistaken in saying "about the year 1884 he opened the little shop in which he lived up to the time of his death," as Pashley lived for many years in the quaint old "customs-house" near by.

In the second part Pashley gives a few of his early recollections; some of his descriptions of the old-time gunners are delightful, such as that of old Moy who used to take the eggs of the "Clinker" (Avocet) on Salthouse Marshes when a lad.

The actual "diary" itself follows, and space only permits one to say here that it seems unlikely that it will fall to the lot of any other man to form such a remarkable ornithological record again.

The volume concludes with an annotated list of the birds of the Cley district, and this is perhaps the most important part of the book to the ornithologist pure and simple, since it forms a valuable appendage to Stevenson's *Birds of Norfolk*. The status of many species has altered since the days of Stevenson and Southwell, and Pashley's notes on the Sand-Grouse, Shore-Lark, Bluethroat, Bearded Tit, Sandwich Tern and many others should be carefully compared with the standard work.

It must, however, be borne in mind that Pashley did very little actual field-work himself, so that it is not always safe to accept the records of extremely rare birds "seen" by the local men, who may in some instances have made mistakes.

Of the Nutcracker, for instance, he notes; "I have known of three in this district," but it is significant that the bird is not even mentioned in his diary. It might have been mentioned that the Twite, like the Mealy Redpoll and Lapland Bunting, is entirely absent some seasons, and we believe the only Cirl Buntings Pashley actually received from Cley were two obtained in the bushes in the autumn of 1904. The Bearded Tit nested in Cley Marshes in the spring of 1914, the nest being found with young.

No mention is made of the breeding of the Roseate Tern at Blakeney. A photograph in the *Transactions Norfolk &c. Naturalists' Society* (1921-22, page 304) is obviously merely the nest of a Common Tern, but competent observers have assured us that both Roseate and Arctic Terns have bred at "the Point" in recent years.

It only remains to add that the book is well printed, and has an excellent frontispiece of the author; and a careful study shows that with the exception of a few obvious misprints the book has been well edited and the dates carefully checked.

The kindness and perspicacity of the Duchess of Bedford is responsible for the publication of this book, and it will always be a matter of regret that Pashley should have "passed on" without having had the pleasure of seeing the result of his life's work in print.

C. D. B.

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SOME ECOLOGICAL ASPECTS OF BRITISH ORNITHOLOGY.

BY

W. H. THORPE, B.A., M.B.O.U.

CONSIDERING the amount of time and energy which has been devoted to the study of the birds of the British Isles in the field, by naturalists throughout the length and breadth of the land, our ignorance on many points of bird distribution is still much greater than might be expected.

Of the innumerable faunal publications on the birds of these Islands, by far the greater number have dealt with the birds of quite arbitrarily chosen areas, often embracing many different types of habitat and, while valuable as far as they go, give but an inkling of the relative frequency of the species on different types of land. One has only to glance at the British List to realise one's ignorance of the "why" of the distribution of many British forms. The Hobby, Merlin, Wood-Lark and Yellow Wagtail are cases that occur to one's mind.

Ecology has now become a recognized means of approach to the study of Botany and in this field the concepts of association and succession, the two fundamental ideas of Ecology, have already proved most fertile. Yet it was not until the last few years of last century that any definite ecological work was accomplished, although types of vegetation had long been vaguely recognized. Some objection may be raised to the use of the word Ecology for birds, perhaps owing to the large number of new terms invented by the plant ecologist. Many of these are, however, not required when dealing with birds.

It is natural that the first ecological work should deal with plants, for in this field the factors controlling distribution and growth are less complex and more capable of experimental demonstration.

Animal ecology on the other hand is a much more difficult study on account of the vastly greater number of species and the much greater complexity of the interrelations of animals. The unattainable ideal is that the investigation of plant ecology should be virtually complete before commencing the study of animal ecology, since the whole of the animal life of the world is directly or indirectly dependent on the plant world. To wait for this is however impossible, for, to quote Tansley, "we have not yet approached a complete knowledge

of the Ecology of any single species of plant." In the same way the study of bird ecology would be a much simpler matter if we had a detailed knowledge of the life histories and inter-relations of the multitudinous species of terrestrial Invertebrates.

By far the greater part of the work in animal ecology so far accomplished has been carried out in the U.S.A., and American naturalists such as Adams, Forbes and Shelford, to mention only a few, have been pioneers with regard to both vertebrate and invertebrate animals. It is in the field of Marine Biology that perhaps the greatest amount of ecological work has been done in Great Britain, but even here associational Ecology is as yet in its infancy.

Ecology, in a broad sense the study of the organism in relation to its environment, can be roughly divided into three branches, as follows :—

- (1) The study of an individual of a species.
- (2) The study of a group of taxonomically related animals, such as the individuals of a species or a group of closely related species.
- (3) The study of an association of interacting animals in relation to their organic or inorganic environment.

With regard to the study of individual birds or individuals of a species, comparatively little has yet been done except at the breeding season, although there is much good ecological observation scattered in various guises throughout the literature of British birds. Mr. J. P. Burkitt has shown what there is to be done in this way in his recent detailed study of the Robin, and Dewar's study of the Oystercatcher is another noteworthy example.

Succession is one of the concepts typical of Ecology. The changes in fauna due to the activity of man are known to everyone and it would seem are in the main due to indirect action. An interesting example of this is that of the change in feeding grounds of Herons at Belfast Lough recorded by W. E. Praeger. Owing to the cutting of a straight channel for the river at the mouth of the Lough, the mud-banks covered with *Zostera* were transformed into banks of firm sand. The sea-grass no longer flourished, with the result that sand-eels (*Ammodytes*), which apparently formed the main food of the Herons, also disappeared. With the disappearance of the sand-eels the Herons and other birds took to other feeding grounds, and thus the chain of events continued, for no one can say where such an effect will end.

Other cases of succession in the bird world are discussed by Ritchie with particular reference to the influence of man. There is, however, need for a great deal more observation on these lines, for it is easy to theorize but difficult to prove what is really the primary factor in the change. In the case cited above there might have been so many other factors, each having its effect on the distribution of the birds. A well known and more definite case, which has already been quoted in detail by more than one recent writer, is that mentioned by Ritchie in his *Influence of Man on the Animal Life of Scotland*. In this instance the encouragement of a breeding colony of Black-headed Gulls by man resulted in a complete change of the vegetation from heather moor through coarse grassland to a flora of rushes ; this in its turn causing a corresponding change in the fauna, both vertebrate and invertebrate. With the raiding of the colony and the consequent departure of the Gulls the reverse process took place, finally resulting in the re-establishment of the original type of vegetation and fauna.

In the way of accurate estimation of numbers of birds practically nothing has yet been done in England although Collinge and others have indicated the need for it. In the U.S.A. there have been several estimations of bird population, notably those under Prof. S. A. Forbes, in connection with the State of Illinois Biological Survey.

Forbes's method is for two observers to travel in line across country, choosing as far as possible representative tracts for survey. A distance of thirty yards is kept between the two and all birds flushed on a strip 50 yards in width or flying across within 100 yards in front are carefully noted. Distances travelled on each of the various types of land are noted and the numbers and species of birds peculiar to each type of land are noticed. He lays great stress on the tabulation of records so as to make results available for consolidation in various ways. Forbes's results are interesting, but one doubts if the work has yet been done on a sufficiently large scale to give reliable results. It is obvious that a method such as this is only practicable on fairly open country and that a large number of observations must be made before the resulting tables are of any value, while enumeration and identification must be complete and accurate.

With regard to breeding birds the work is simpler, and H. G. Alexander has already suggested a method whereby a reasonably accurate idea of the numbers of birds breeding within a limited area can be obtained. Careful and regular

observation in one locality is the chief thing in this as in most other ecological work.

Association is another idea characteristic of the ecological point of view. The study of associational bird Ecology has received a certain amount of attention both in the U.S.A. and in this country, although the literature is nevertheless very meagre, and it is this side of the subject that I wish to deal with here with especial reference to the birds of Great Britain.

The only attempt to classify the bird associations of Great Britain, with which I am acquainted, consists of a paper on the "Bird Associations of Scotland" by the late Capt. S. E. Brock. Brock distinguished eight primary bird associations. These eight in some respects follow the divisions of the plant ecologist fairly closely, but in some cases, as is to be expected where edaphic or soil factors are dominant, differ widely from them. For instance, there is a close correspondence between the Arctic-Alpine and moorland formations of the botanist on the one hand and the ornithologist on the other, while the varying woodland types of Siliceous and Calcareous soils find but little correlation in the bird world, although divisions of this nature would no doubt be much more clearly marked had we any detailed information as to the quantitative distribution of our breeding birds. On the whole, however, the effect of the plant association on bird distribution is undoubtedly very great, and to quote Brock: "By virtue of environmental bias and nesting requirements it is probable that the bird succession follows more immediately the plant succession than that of the food complex." Chapin has also pointed out how close is the relation between bird distribution and the plant communities with regard to tropical Africa, and Gates has stressed the same point with regard to some of the common birds of Illinois.

I have attempted an Ecological classification of British birds adhering, where possible, to the "Formations" of the plant ecologist, and in this respect differing to a slight extent from Brock. It will be noted that the grouping holds good in the breeding season only, for in spring the associations are more clearly marked than at any other time. The breeding habitats form the natural starting place and having once marked out these the autumnal and winter aspects of the associations can be more effectively studied. In this classification I have not attempted to mention every species which is to be found in each association but only those most characteristic of their respective associations. It is of course

obvious that many species occur in two or more associations, and there are some birds such as the Wren and Robin which are extraordinarily widely spread and are to be found in almost every association. The Ecology of such birds is of exceptional interest, for we are in many cases very ignorant of the secret of their success. Nevertheless, their distribution is frequently looked upon as of little interest and is too often passed over in text books with some such phrase as "common in suitable localities."

It must be borne in mind that the classification is intended only as a general outline of the bird distribution of the British Isles; I do not pretend to possess the knowledge necessary to describe all the various associations in detail, in their various aspects; to acquire such a knowledge would be the work of a generation of field-naturalists.

It is of course obvious that grouping somewhat on the following lines has in a vague way been the basis of the field-naturalist's outlook for generations, and the rough classification into Moorland, Woodland, Field, Aquatic and Sea-Shore birds was recognized even before the scientific study of Ornithology came into being.

ARCTIC ALPINE ASSOCIATIONS.

ALPINE ASSOCIATION.—This is a small and very definite association confined to the mountain tops of the north, and closely corresponding to the Arctic-Alpine Associations of the botanist. There are three birds which are quite characteristic of this association and are found in no other: namely Dotterel, Ptarmigan and Snow-Bunting. The Dotterel is particularly associated with the community known as *Rhacomitrium* Heath; the moss *Rhacomitrium lanuginosum* being particularly favoured for nesting purposes, in this country at any rate. The Snow-Bunting is more dependent directly upon the geological formation and on the nature of weathering of the rock.

The SUB-ALPINE ASSOCIATION recognized by Brock may perhaps be equally well considered as the high ground association of the Moorland Group. When compared with the plant associations it seems to fall more naturally into the latter group.

Birds such as Golden Eagle, Peregrine, Raven and Buzzard, dependent largely on cliffs for nesting purposes, I have placed separately under Inland Cliff Association. From a food point of view, however, they should be included in the Moorland Associations.

MOORLAND ASSOCIATIONS.

UPLAND MOOR ASSOCIATIONS.—This comprises the highest areas of moorland and contains birds such as Red Grouse, Wheatear, Meadow-Pipit, Ring-Ouzel, Golden Plover, Merlin, etc. This is equivalent to the upland heath of *Vaccinium* and *Calluna* in dry situations and Cotton Grass and *Scirpus* moor of the wetter land. In the upland moor there is apparently but little correspondence between the bird-fauna and the botanical subdivisions of wet and dry, but in the case of the lowland moor these are very marked, although it is hard to draw a line between upland and lowland moor and the division, from a bird point of view alone, is perhaps unsound.

The Heath Association is the climatic climax on high exposed moors in north and west, but in south is succeeded by birch and pine and sometimes oakwood, consequently in those districts the woodland bird associations are the natural climax.

LOWLAND MOOR ASSOCIATION.—This association may be roughly regarded as moor and heath-land from 1,000 ft. nearly to sea-level and includes the southern heath community of sandy soils. The association, as is to be expected, is richer both in individual species and in numbers and shows marked variation in its damp and dry aspects, the damper parts being considerably richer in bird-fauna. In the dry part the bird-fauna merges imperceptibly into that of the Upland Moor Association. The wetter parts bear a much bigger nesting population merging into that of Fen Association. Birds such as the Short-eared Owl and Hen-Harrier, and in places the Common Gull, Dunlin and Teal may be mentioned.

In the wet districts there is an important breeding population merging into that of the Fen Association. Of the *Limicolæ*, Curlew, Snipe and Redshank are found; while in the north, Whimbrel, Dunlin and Greenshank also find a place. Among the *Lari* the Lesser Black-backed, Black-headed and Common Gulls, and the Great and Arctic Skuas must be mentioned, the last three being characteristic of the northern aspect of the association only. These latter tend to form colonies equivalent to the consociations of the botanist. Among the ducks, Wigeon, Teal and Common Scoter occur and the Montagu's Harrier must be mentioned.

From the dry moor the succession is scrub of gorse, hawthorn, etc., leading to the climax of various types of woodland.

With the growth of gorse the Linnet becomes dominant and where present the Black Grouse reaches its climax. In the north Capercaillie, Lesser Redpoll, Twite and Nightjar appear

with the advent of birch-oakwood or sub-spontaneous pine. In the south the Meadow-Pipit, Yellow Bunting, Whinchat and Stonechat are frequent, locally the Dartford Warbler, Cirl Bunting and Woodlark, while with the coming of the bushes we get the advance guard of the host of small Passerine birds which depend on bushes for nesting sites; the ever-present Wren here reaches its climax, and the Hedge-Sparrow, Robin, Long-tailed Tit, and the Finches, which latter may be said to attain their dominance in scrub-land proper, or in its man-made modern representative, namely the hedgerow.

This leads us naturally to the woodlands and these had best be considered next, leaving the remaining types of scrub-land for consideration in connection with the various types of grassland with which they are associated. Brock has already described a succession from heath to larch plantation in Scotland.

WOODLAND ASSOCIATIONS.

The different types of woodland are naturally and easily divided into coniferous and deciduous, and this primary division holds good for birds in a very marked way. The Scots pine, as its name implies a native of Scotland, became extinct in England in prehistoric times but was re-introduced in the 17th and 18th centuries and became established, producing the pure sub-spontaneous pine-woods found on the poor sandy soils of the Greensand and Wealden formations of the south of England.

PINE-WOOD ASSOCIATION.—The bird community of the northern pine-wood is very definite and may be distinguished by the following birds: Crested Tit, Goldcrest, Siskin, Crossbill (the Scottish form is said to have a partiality for larch), Capercaillie, Black Grouse, Long-eared Owl and Sparrow-Hawk. The more open pine-wood heath is preferred by the Lesser Redpoll and perhaps the Crossbill.

The sub-spontaneous pine-wood community of the south is similar, but more restricted, the distinctive birds being the Crossbill and Black Grouse, where present, and the Goldcrest, the Long-eared Owl and Sparrow-Hawk. Of the other birds found in this community, the Tits for example, it is difficult to say that any save the Coal-Tit shows a marked preference for pine-wood.

With regard to the different types of **DECIDUOUS FOREST** it is difficult to separate them satisfactorily on a bird-basis, at any rate in the present state of our knowledge (or rather lack of knowledge) of the relative density of bird-distribution.

The main factor governing the frequency of small birds is the presence or absence of undergrowth depending largely on the closeness or otherwise of the "canopy."

The oak is the dominant tree in most of the deciduous woodland on clays and loams and the finer sandy soils, and the usual form, known as "Coppice with Standards," is, owing to its open canopy, particularly favourable for small birds. A wood such as this has four distinct strata of bird-life, that of (1) tree-tops, (2) boles, (3) bushes, (4) ground-vegetation. It is not necessary here to give the long list of birds to be found in a typical British oak-wood; there are, however, one or two birds which need mention. The bird-fauna of a wood depends not only on the closeness of the canopy but also on the stage of the coppicing. A wood recently coppiced has a big fauna of small insectivorous birds such as the various Warblers, Nightingale, Spotted Flycatcher, etc., but as the growth of the coppice nears completion the small bird-fauna becomes very much reduced till it may approximate to that of a wood in close canopy and contain perhaps only Wren and Robin, which birds seem more or less indifferent of the state of the undergrowth. Here is a well marked succession following that of the vegetation and one which when worked out would doubtless repay investigation.

The birds which occur in the highest stratum are less affected by the state of the canopy except in so far as the shape of the trees is affected, this in its turn affecting possible nesting sites. The Green Woodpecker may be mentioned, however, as a bird which prefers an open type of woodland, while the Great Spotted is more a bird of closed woods. The Woodcock is an example of a bird with distinct preference for oakwood of the damper type.

The bird-fauna of the other types of woodland is governed by the same general factors as the last.

The pure beechwood of the chalk is characterised by lack of undergrowth and consequent paucity of small birds. The Honey-Buzzard is an example of a former British breeding bird said to be particularly partial to beech. In the Alder-Willow Wood Association of damp clay soils the Marsh- and Willow-Tit attain their chief centre of distribution, a preference which although not very marked is hardly explainable on a food basis. In this connection the Goosander also may perhaps be mentioned as a bird occurring in the more northern aspect of the Association. Of the other more restricted types of woodland fauna in Great Britain the Ash Consociation of Limestone soils and the Highland Birchwood type deserve

mention although it seems doubtful how far they can be separated on ornithological grounds.

It is obvious the alteration produced by man on the woodlands has had a great effect on the bird-life, but it is difficult to estimate accurately the conditions of former times owing to the fact that hardly any examples of virgin deciduous forest now occur in the British Isles.

GRASSLAND ASSOCIATION.

Four types of grassland may be distinguished. Of these types the general bird association is fairly constant, local variations being influenced by altitude and water content of the soil.

(1) Hill Pasture. High-lying grass-land of Siliceous soils.

General Association of Lark, Meadow-Pipit, Wheatear, Curlew and Lapwing with damp community indicated by Snipe.

(2) Low-lying grass-land on Clays and Loams.

This association is mainly artificial and this possibly accounts for some of its peculiarities, namely the absence of Wheatear and Curlew and presence of Corn-Bunting, Corn-crake and Partridge; the frequency of the first two especially being affected by the relative proportions of pasture and meadow.

The damp community is richer in species, containing in addition Yellow Wagtail and Redshank.

(3) Calcareous grass-land. Limestone. Chalk.

(4) Sandy grass-land.

These two types can be largely characterised by the presence of Wheatear, Corn-Bunting, Short-eared Owl and Stone-Curlew. The Red-legged Partridge is more particularly characteristic of type 4.

The absence of the Stone-Curlew from the greater part of the grass-land on the Carboniferous Limestone is presumably due mainly to geographical position and not to ecological considerations.

ARABLE LAND ASSOCIATION.

The power of adaptation to the somewhat unnatural conditions of arable land, though occasionally found in many birds, is confined to comparatively few species as a general rule. The effect of crop-rotation on numbers and species would seem to be a promising line for future observation. Here again there is a difference correlated with water-content of the soil; Lark, Partridge and Corn-Bunting being more typical of the dry, and Lapwing and Yellow Wagtail of the wetter ground.

Of the scrub association by which clay and loam grass-land passes to the Oakwood Community, there is very little now left, although examples can be seen in the English grass commons which still remain and afford nesting-sites for the greater number of Passerine birds. The scrub is mainly composed of hawthorn, blackthorn, gorse and bramble, and the bird-fauna chiefly depends on the proportions and stages of growth of these four; the Turtle-Dove favouring blackthorn and whitethorn, the Linnet gorse and bramble, and so on. It is no doubt this community which has directly given rise to the man-made community of the Hedgerow.

DRAINAGE SYSTEM ASSOCIATIONS.

Brock has used this term and from the bird point of view it seems more concise and satisfactory than the term Fresh-water Aquatic Formation already in use by plant-ecologists.

RIVER ASSOCIATIONS.

MOUNTAIN STREAM.—This may be distinguished by three birds: namely, Dipper, Common Sandpiper and Grey Wagtail. The reason for the restricted habitat of the Dipper is hard to see. The need for clear water doubtless has something to do with the distribution, but this does not seem sufficient to account for all the facts; it is to a certain extent the counterpart of the Ring-Ouzel in the High Moorland Association.

RIVER.—The bird-fauna of the slower flowing stream and river lacks the Dipper, but contains other species of Wagtail, Kingfisher, Snipe, Little Grebe, Moorhen, Mallard, Shoveler, Gadwall and Garganey. When the base line of erosion is reached and the rate of flow becomes slower still, we get the development of

REED SWAMP.—This implies the characteristic bird-fauna of Sedge- and Reed-Warblers and Reed-Bunting; and Little Grebe, Water-Rail, Moorhen and Coot in their respective strata. With the formation of large areas of reed-swamp the typical Broadland Association is reached, containing in addition Bearded Tit, Bittern and Great Crested Grebe.

The succession from Reed-Swamp is *via* Fen and Fen-Carr to Alder-Willow Wood already mentioned.

FEN ASSOCIATION.—This reaches its greatest development in East Anglia and has a fairly definite association of birds, of which Montagu's Harrier, Short-eared Owl and Grasshopper-Warbler are among the most typical.

LAKES.—Brock in dealing with the Scottish Lochs distinguishes four different types which I think hold good for Great Britain as a whole.

- (1) Peaty Loch of the Moors, generally poor in bird-life.
- (2) Lowland Loch with fen type of vegetation and bird-fauna.
- (3) Deep Loch of Highland Valley with distinctive bird-fauna, including Common Sandpiper, Red- and Black-throated Divers and Goosander.
- (4) Sea-Loch typified by Merganser, Oystercatcher and Common Gull.

MARITIME ASSOCIATIONS.

In the case of sea-birds the dependence on the geological formation is obviously very close and the breeding habits may be divided into three main divisions of Rocky Coast, Sand and Shingle, Salt-Marsh.

ROCKY COAST.—Cliffs with ledges and flat topped stacks. Sea not receding from base. This of course is the association of Guillemot, Kittiwake, Razorbill, Cormorant and Shag, with the Fulmar occurring in the north. The habitat localization is very great, the Guillemot preferring open ledges, the Razorbill crevices and clefts. Each species thus tends to form separate societies (consociations) within the main association. The community as a whole is dependent mainly on igneous rocks, especially basalt, which weather in the necessary way. These strict limitations seem quite sufficient to account for the extraordinary crowding of the birds on suitable ledges, although the law of territory, with all that it implies, is apparently operative. In the case of the Terns and some of the Gulls, however, which are less exacting in their requirements, this alone seems insufficient to account for the gregarious breeding habits and it is interesting to speculate as to what biological end the gregarious instinct may serve during the breeding-season and to compare it with that of a bird such as the Rook among Passeres, or the Lesser Kestrel among the Accipitres, where the nesting-habits certainly cannot be explained on grounds of scarcity of nesting-sites and food-supply. Mutual protection may account to a certain extent for the gregarious habit, but it is difficult to believe that this can have any very potent influence under present-day conditions.

The Twite is another example of a tendency towards gregarious habit not easily explainable. Herrick, referring to the Herring-Gull, thinks the gregarious habit is due merely to the

attempt to satisfy a strong social instinct, and Pycraft has supposed that the development of a social instinct is of direct value in the struggle for existence.

On coasts which do not fulfil all the conditions necessary for the establishment of the above association we get the occurrence of the cliff-breeding *Corvidæ*: the Peregrine and Kestrel; Herring- and Black-backed Gulls and the Cormorant and Shag; the last two comparing in nesting preferences to Guillemot and Razorbill. Where the rock is sufficiently soft colonies of Sand-Martin occur.

TURF-TOPPED CLIFFS AND ISLANDS.—This habitat forms the chief breeding-ground of Puffin, Manx Shearwater and Sheldrake as burrowers; and Eider and Merganser as ground-nesters; while the Oystercatcher is also typical. On the mainland and on large islands there is a landward succession leading to the association of Lowland Moor, Scrub or Grassland, as the case may be.

SAND AND SHINGLE.—In this group the Common Tern and Black-headed Gull are birds with little habitat specialization, nesting equally freely on shingle, sand-dune and salt-marsh. Other birds in the association show a preference, in some cases slight, in others strong, for certain types of substratum. Thus on rocky beach and coarse shingle the Arctic and Roseate Terns are more frequent; Kentish Plover and Stone-Curlew also find a place where they occur. On the fine shingle the Little Tern is more typical, while with the sand and sand-dunes the Ring Plover and Sandwich Tern reach their optimum conditions. With the *Dunes* we get Sheldrake, Eider, Stock-Dove with Wheatear, Lark and Meadow-Pipit among the *Passeres*. With the landward bush-growth there is the commencement of the scrub-land association as mentioned above. Brock gives a typical succession of this sort in some detail.

SALT MARSH.—This is not a very definite association from a bird point of view, at any rate in Britain. The bird-fauna consists of a few birds which are more naturally considered in the adjacent habitats of Moorland or Sand and Single.

ASSOCIATION OF INLAND CLIFFS AND BUILDINGS.

In the Inland Cliff Association may be placed those birds, apart from sea-birds proper, which depend almost entirely on cliffs for breeding purposes. Golden Eagle, Peregrine and Raven are three birds, otherwise most characteristic of the Arctic-Alpine and Moorland formations, which are now very dependent on the presence of cliffs; although in other

districts, such as the Steppes of Asia, such birds may make shift with other nesting-sites. Among birds less exclusively dependent on this habitat may be mentioned the Jackdaw and Kestrel.

The distribution and frequency of the Sand-Martin must have been largely affected by man by reason of the birds' dependence on soft cliffs and banks.

It is in this association that man has had by far the greatest influence on the bird population, not only by the erection of buildings and consequent provision of nesting sites, but also by quarrying and other similar activities. One point worthy of note is the way in which many birds now common members of the Association of Buildings, have almost completely forsaken their original habitat in favour of the man-made alternative.

A description of the bird communities of buildings is of course unnecessary. The members of the association differ greatly in their dependence on the habitat, ranging from birds such as House-Sparrow and Swallow, which are now almost inseparable from it, to occasional members like the Nuthatch. In most cases the change of habit has been, as one would expect, from the natural associations of cliffs and trees, but the Pied Wagtail is a case in which the change seems to have been considerably greater.

This concludes our survey of the habitat localization of British birds at the breeding-season. It will be seen that five of the seven bird formations correspond in a general way to the botanical associations. In the case of Arctic-Alpine and Moorland Associations the correspondence is very close, and in all probability more detailed observation on ecological lines will reveal closer correlation between bird-distribution and some of the more restricted types of deciduous forest. I do not of course suggest that the close relation between bird and plant associations in a formation such as the Arctic-Alpine is entirely due to dependence on the vegetation; the influence of climatic factors is no doubt to some extent direct, but morphological specialization in birds is not sufficient to account for the restriction of habitat of such highly organised creatures. In many cases great variation between summer and winter habitat shows that the food supply is not the limiting factor.

It will be obvious that there are many omissions and rough generalizations in the foregoing review. I have purposely not attempted to go into any great detail; that can wait till we have more observation on definitely ecological lines.

Again, every ornithologist knows how dangerous it is to dogmatize with regard to bird-habits, there are always bound to be exceptions to every generalization. For these reasons it is of course not to be expected that vertebrate animal communities should be as distinct as those in the plant world ; and it must be remembered that even the plant communities are seldom sharply delimited.

I have appended a list of a few papers dealing with various aspects of ornithology on more or less ecological lines in order to make more widely known some of the not very accessible literature on the subject. The list in no way pretends to be exhaustive.

- ALEXANDER, C. J. & H. G. 1909. *Brit. Birds*, Vol. II., p. 322.
 "On a Plan of Mapping Migratory Birds in their Nesting Areas."
- ALEXANDER, H. G. 1914. *Brit. Birds*, Vol. VIII., p. 184.
 "A Practical Study of Bird Ecology."
- BROCK, S. E. 1910. *Zoologist*, p. 401.
 "The Willow Wrens of a Lothian Wood."
- 1914. *Brit. Birds*, Vol. VIII., p. 30.
 "The Ecological Relations of Bird Distribution."
- 1921. *The Scottish Naturalist*, pp. 11-21 and 49-58.
 "Bird Associations in Scotland."
- BURKITT, J. P. 1924. *Brit. Birds*, Vols. XVII. and XVIII.
 "Movements of the Robin Studied by Means of Marked Birds."
- DEWAR, J. M. 1915. *Zoologist*, pp. 281, 340, 376, 426, 458.
 "The Relation of the Oystercatcher to its Natural Environment."
- PRAEGER, W. E. 1920. *Ecology*, Vol. I., p. 41.
 "A Note on the Ecology of Herons."
- ROWAN, W. 1914. *Brit. Birds*, Vol. VIII., p. 250.
 "The Blakeney Point Ternery."
- CHAPIN, J. P. *American Naturalist*, Vol. LVII., p. 106.
 "Ecological Aspects of Bird Distribution in Tropical Africa."
- COOKE, WELLS W. 1915. *Washington D.C. Dept. Agr. Bulletin*, No. 187.
 "Preliminary Census of the Birds of the United States."
- FORBES, S. A. *Illinois State Lab. Nat. Hist. Bulletin*, Vol. VII., p. 305 ; Vol. IX., p. 373 ; Vol. XIV., pp. 187 and 397.
 "An Ornithological Cross Section of Illinois in Autumn."
 "The Midsummer Bird Life of Illinois."
 "On the Numbers and Distribution of Illinois Land Birds of the Open Country in Summer."
- GATES, F. C. 1911. *Wilson Bulletin*, Vol. XXIII., No. 74, p. 1.
 "Summer Bird Life in the Vicinity of Havana, Ill., in its Relation to the Prominent Plant Associations."
- HERRICK, F. H. 1912. *Proc. 7th Inter. Zoo. Congress*, Vol. XIV., p. 156.
 "Organization of the Gull Community."
- JUDD, S. D. 1902. *U.S. Dep. Ag. Div. Biol. Survey Bulletin*, No. 17
 "The Birds of a Maryland Farm."

A STUDY OF THE ROBIN BY MEANS OF
MARKED BIRDS.

(FOURTH PAPER.)*

BY

J. P. BURKITT.

I HAVE been able to continue watching my Robins (*Erithacus r. melophilus*) for a further six months, from December 21st, 1924, to June, 1925. The result corroborates the conclusions which I tabulated in my last paper (XVIII., p. 250). Before proceeding further I wish to make clear one point which my tabulated conclusions may not have quite brought out. It is that though there is a certain wandering of females and young birds for varying periods (as described) from June to October, yet normally every Robin holds territory in the remainder of the year.

I am now dealing with an area containing fourteen to fifteen pairs and four mateless males. Of this lot eleven pairs plus four mateless males, or twenty-six birds, are the occupants of an area, at the end of the breeding season 1925, which same area held twenty-four single birds at the end of my last year, December 1924. It is thus to be noted that notwithstanding the changes which regularly take place amongst all except male parents, yet there is a practically constant number of birds holding territory in a given area, whether in the breeding season or at the end of the year. I previously mentioned that in 1924 an area which held twenty birds in the breeding season held nineteen at December.

The existence each breeding season of a proportion of mateless males (see table below) is to be noted in any consideration of the question of population. This compulsory matelessness for a part or the whole of the season appears to occur in many species. I have shown in the *Irish Naturalist*† how in various species the inability to secure a female seems to provide us with much more song than we should otherwise have, and how in the case of the Common Whitethroat‡ (*Sylvia c. communis*) it is the cause also of multiple cocks' nests with their curious adornment. (I may remark by the

* For previous papers see Vol. XVII., pp. 294-303; Vol. XVIII., pp. 97-103 and 250-257.

† Vol. XXVIII., p. 97; Vol. XXX., pp. 1 and 113; Vol. XXXI., p. 117.

‡ Vol. XXVII., p. 142.

way that the late broods of the Whitethroat are due to a female finally occupying one of these nests and not to second broods, as I have seen assumed.)

My first tabulated proposition (A, p. 250, Vol. XVIII.) that a male (provided he has bred) normally retains the whole or a part of his territory permanently is amply supported by the table below, see note 2. But of course tenancy must come to an end some time. I made the comment (on p. 251) that just possibly I might go further and say that all males, once they have held any territory, persist there; but this does not appear to be the case. The males which have held a territory through the breeding season, even though mateless, do appear to persist, but males which have only acquired territory since the last breeding season may not persist. The movement of such males is, however, a comparatively small matter compared with that of females.

The following is the movement among such males for spring, 1925 :—

One male (58) arrived in the second half of January and left again in the middle of March. One male (51) which had only been resident from the end of October to mid-November returned in the second half of February. A male (41), resident since its adolescence in July last, left early in May but reappeared on August 26th in the same site. Another male (52) which was resident since November 11th last was apparently displaced at the end of April by a new male (68). (These males are assumed to be of that sex, but with practical certainty, judging by their song and conduct.)

The following describes my known female movement for spring, 1925 :—

Of twelve parents seven were newcomers. The other five had been resident in my area in winter. Of these five, three had held territories bordering those of the males with which they mated, and the territories were joined up. The other two had held territory near at hand to the males' but not bordering. These two females thus vacated their winter territory and might be classed with the seven newcomers. Further, two winter residents which were probably females left me before the middle of February.

The times of forming pairs were as follows :—

The five resident females made the earliest pairs, namely between January 10th and 24th. Another pair was also formed in January, making altogether six pairs in that month. There were two pairs formed in February; four pairs in March; one pair in the first week of April. This

shows the gradual pairing as a result of the spring movement of females, some moving out, others moving in (similar to that for 1924, see Vol. XVIII., pp. 97, 98). I omit any record of temporary females on passage. In these two years the maximum movement of my own resident females was in January, while the maximum pairing due to incoming, as distinct from resident, females was in March.

I referred on p. 101, Vol. XVIII., to excursions by males into strange territory in the mating season of from 120 to 200 yards. I particularly noted one of such visits this year where a bird (55 F.?) was found on January 5th visiting in the ground of a male (44) over 200 yards away and quite out of sight; while on January 31st I found the reverse, namely 44 in the ground of 55. 55, which was probably a female, disappeared altogether a few days later, having meanwhile been seen out of its territory. These excursions by males probably go to much greater length, as I have had frequent instances in several mating seasons of what appear to be absences of males from their territory of from one to ten days, the shorter periods being the commonest. In a few cases the male on his reappearance has had a female companion.

I have noticed that a female for some days in the early stages of pairing with a male (both their territories being within my observation) may repeatedly make returns to her own territory; and their intimacy may not for a fortnight be sufficient to tolerate feeding together at the same board.

These observations suggest the possibility that a male making excursions may spend his absence in a female's territory.

A detached incident about territory may be worth recording, where about mid-November two birds, occupying territories on the opposite hedges of a field about 120 yards apart, exchanged places. One and probably both were females. The doubtful one left in the New Year.

SONG.

Anything further which I have observed *re* female song corroborates my proposition I (Vol. XVIII., p. 250). For example, bird 49, which turned out to be a female, was heard to sing a bar on October 25th and again to sing a bar on November 30th on the excitement due to a neighbour trespassing, but that was the total song observed from her. It must be remembered, as I have said in a previous paper, that the rare occasions of female song with me have been

mostly on occasions of hostility. It is quite incorrect to assume that it necessarily means courtship with the visitor. Neither is it correct to assume that when one Robin perches close under another which is singing on a tree, that the former is a female to which the latter is singing. Nor again, that one Robin swaying its head from side to side facing another in the well-known attitude is courtship. In my experience with marked birds these several attitudes were, I think, in all cases hostility. The Robin just under the singing one is being worked up to bursting point of animosity against the singer. (I have often seen the same with Thrushes.) I mention these points because I have seen the reverse recently assumed.

The cessation of Robin (male) song this summer may be compared with my previous notes for other years.

It was as follows: Very little song in the last week of May; by June 1st less than one-fourth of my males were giving any song; by June 21st all song had ceased. The prompt resuscitation of Robin spring song (as distinct from weak winter song) about the New Year was again corroborated this season (see Vol. XVII., p. 302). And this song may be made in spite of unpleasant weather.

TABLE III.

TO JUNE 1925, OMITTING THOSE BIRDS (MOSTLY FEMALES, SEE NOTE 2) WHOSE DISAPPEARANCE HAS ALREADY BEEN NOTED IN PREVIOUS TABLES—SEE VOL. XVIII., pp. 102 AND 257.

No. and sex where known	First noticed in occu- pation	Date Marked	Mate in 1923	Mate in 1924	Mate in 1925	Notes.
2 M	—	-/10/22	10	34	34	
9 M	—	14/1/23	14	36 and ano- ther	66	
†11 F	—	4/2/23	Not mar- ked	19		Not seen since 24/7/24.
16 M	—	9/6/23	15	Not mar- ked	Not ex- am- ined	Extant, but not watched.
18 M	—	30/7/23	Born	14	67	
19 M	2/7/23	9/9/23	Born	11	64	
20 M	8/8/23	12/9/23	Born	27	27	
21 M?	8/8/23	16/9/23	Born	None	—	Lost a foot. Not seen since 5/12/24.
22 M?	—	22/9/23	—	None	None	
26 M	—	26/10/23	—	37	None	
27 F	5/11/23	16/11/23	—	20	20	
†32 M	28/10/23	3/2/24	—	35	—	Not seen since 14/6/24.
34 F	3/2/24	1/3/24	—	2	2	

No. and sex where known	First noticed in occu- pation	Date Marked	Mate in 1923	Mate in 1924	Mate in 1925	Notes.
†35 F	16/2/24	3/3/24	—	32	—	Not seen since 1/12/24.
†37 F	4/3/24	12/3/24	—	26	—	Not seen since 27/7/24.
38 M	19/3/24	28/3/24	—	40	65	
39 M	19/3/24	19/5/24	—	Not mar- ked	49	
†40 F	-/4/24	22/5/24	—	38	—	Not seen since 14/6/24.
41 M?	17/7/24	24/7/24	—	Born	None	Absent between early May and 26/8/25.
43 F	-/7/24	26/8/24	—	Born	45	
44 M	23/8/24	30/8/24	—	Born ?	62	Pairing not verified by knowing nest.
45 M	22/6/24	31/8/24	—	Born	43	
†47	17/10/24	31/10/24	—	—	—	Not seen since 24/1/25.
†48 F?	24/9/24	2/11/24	—	—	—	Not seen since 18/1/25.
49 F	23/10/24	2/11/24	—	—	39	
50 F	14/10/24	7/11/24	—	—	54	
51 M?	27/10/24	15/11/24	—	—	None	Not seen between 15/11/24 and 25/2/25.
†52 M?	11/11/24	15/11/24	—	—	—	Apparently displaced by 68 on 28/4/25.
53 M	23/11/24	13/12/24	—	—	60	
54 M	11/11/24	13/12/24	—	—	50	
†55 F?	14/12/24	21/12/24	—	—	—	Not seen since 5/2/25.
56 M	-/1/25	4/2/25	—	—	57	On border, history uncertain.
57 F	-/1/25	4/2/25	—	—	56	Ditto.
†58 M?	18/1/25	7/2/25	—	—	—	Not seen since 16/3/25.
59 M	-/1/25	20/2/25	—	—	63	On border, history uncertain.
60 F	12/2/25	28/2/25	—	—	53	
61 F	—	3/3/25	—	—	Not mar- ked	On border, history uncertain.
62 F	7/3/25	14/3/25	—	—	44	
63 F	23/2/25	19/3/25	—	—	59	
64 F	8/3/25	20/3/25	—	—	19	
65 F	20/3/25	26/3/25	—	—	38	
66 F	3/4/25	15/4/25	—	—	9	
67 F	20/3/25	10/5/25	—	—	18	
68 M?	28/4/25	25/5/25	—	—	None	

- NOTES: 1. All except those marked † are extant at June 1925; the males keeping to site where first noticed.
2. No. 32 is the only known male *parent* (except 17) which has disappeared since study began. See p. 251, Vol. XVIII.
3. No. 39 in my first table, Vol. XVIII., p. 103, should be a male.
4. The sexes queried are almost certain to be correct, but there was no pairing to verify.

NOTES ON THE NESTING OF THE GREAT SPOTTED WOODPECKER.

BY

J. H. OWEN.

DURING the last few years the Great Spotted Woodpecker (*Dryobates major anglicus*) has become decidedly more plentiful in this part of Essex. When I first came to Felsted in May, 1907, I very seldom saw one, but now there is at least one pair in most of the woods, and several pairs in trees in the open as well. As evidence that they are fairly common now I may say that I have several times known one of a pair killed by Sparrow-Hawks, and the survivor had a mate again in a very short time, even if the partnership was broken in the spring.

In the woods the nests are either in oak or poplar ; in the fields I have seen nests in elm, pollard-willow, apple, ash and walnut. Once or twice I have gone to considerable trouble to make observations on this bird, but in 1925, having found a nest a bare seven feet from the ground in a dead poplar, I determined to attempt to do so on a more elaborate scale. With the help of a boy I built an observation hut six feet from the nest-hole and hoped to get photographs and notes. Unfortunately, I could not be at the nest at the best time for the first purpose (before 11 a.m.), but the notes were very easy to get and extremely interesting. The hole was a bad one for photography, as the birds had bored a second hole, a few inches below the entrance, into the nest cavity and the wood between the two had broken away ; hence, whenever a bird came to feed the young it got more or less into this hole and out of the light, so that the black parts of the plumage do not come out at all well. Another point against successful photography was that this pair of birds seemed unusually nervous, and consequently their movements were very quick and uncertain. These birds nest much earlier than the Green Woodpecker and have often hatched before the latter have finished laying. The Green Woodpecker will use a hole in successive years if the site is not taken by other birds, such as Starlings, Sparrows or Great Tits, but will seldom go back to it another year if it happens to be unoccupied. Yet a nest-hole I found in 1907 was again occupied by Green Woodpeckers in 1918, although in the intermediate years it was occupied by Starlings and empty in 1917. The stock of Starlings was cut down by the big

frost in 1917 and many of the sites usually occupied by them were empty for a year or two. Hence probably the re-occupation of the hole by the Woodpeckers. My experience of Great Spotted Woodpeckers is that they seldom use a hole more than two years in succession, but then use another tree for one year, returning to the old tree in the fourth year, when they use the original boring or make a fresh one; the latter is the more usual proceeding in a poplar, but not in a harder wood like oak or elm.

Without enlarging the hole it is impossible to get definite facts about the incubation-period, although the cavity is very shallow compared with that of the Green or even the Lesser Spotted Woodpecker in decayed wood. I am led to think that it is approximately sixteen days; as the bird, however, does not wait until all the eggs are laid before beginning incubation this may well be wrong. In several of the nests I have watched, some of the young have left the nests two or three days before the last. My observations on this point go back to 1911. In the two nests to which I paid any attention this year some of the young left before the others.

With regard to the parts taken by the sexes in incubation my notes are quite inconclusive. I can only say that I have never put the male off the eggs, nor seen him relieve the female. He frequently comes up to the neighbourhood of the nest, but I have never seen him enter the hole. During incubation the hen seems to have fixed feeding times, one of which is between noon and 1 p.m. (summer time), and another is between 7 and 8 p.m.; other times I am unable to speak about, as I am not free to watch before 11.30 a.m.

The nestling-period is about three weeks in duration.

There seems to be very little brooding done in the daytime after the first few days after hatching, and my impression is that this is solely the duty of the hen.

How long after leaving the nest the old birds attend to the young it is difficult to say, or when they drive them from the wood. One can find them in the wood with the old ones in close attendance for three weeks at any rate. They are birds that give the alarm note, "keek" or "cheek," on very little provocation at any time of the year, but particularly from March to August.

From a very early age the young are very talkative in the nest; this is so with the Green Woodpecker also. At first the noise cannot be likened to anything; the nearest simile is to a tight-fitting, rather rusty pair of scissors being worked fairly rapidly. Later it becomes "cue-cue-cue" repeated

rapidly, at first loudly and then dying away only to be taken up again. As the young begin to fledge the cry changes to "queek-queek, queek-cue-cue-cue-cue." By the time they are ready to leave the nest the "queek" has developed into the "keek" of the old birds. This note expresses a good many things in its variation of tone by the old birds, alarm, call, etc.

They have other very interesting notes, however, which are only heard during close observation at a nest.

The birds, whether the nest has a hide near it or not, often alight in a tree near-by before going to the nest-tree; they are very wary, extremely keen of sight and hearing, and this is merely one of their precautions. If the two happen to alight in the tree together there is usually a short conversation before one precedes the other to the nest. I have many times attempted to get this low-toned conversation down, but never yet succeeded to my satisfaction. Sometimes the two birds alight on the nest-tree together, or so close together that the first has not had time to get to the hole. In this case the cock always sent the hen first by invariably using the same note "too-ut," repeated two and sometimes three times. I have seen this happen when the male was hardly a foot from the hole when the hen alighted quite eight feet above him, and she immediately backed down to the hole and fed. In these circumstances the hen hurried over the delivery of her supply of food and left without searching the nest for fæces or, at the later period when she could reach the young from outside, entering the nest-hole. Both the birds helped in keeping the nest clean. The sac was carried to a distance and dropped. The bird then wiped its bill up and down a branch before proceeding to hunt for more food. If nervous birds are kept so long from entering the nest-hole that the young break the sac, the old one mixes the excrement with sawdust to get it away. In the later stages of feeding, when the young one pokes its head out of the entrance to see the food, it is easy to see that the old bird turns the bill sideways while the young one's is opened along it. I think that the food is pushed forward with the tongue by the old bird and sucked by the young one. If there is more food left, the old bird turns its head away from the hole and works the food up with the tongue and a movement of the lower mandible. It then waits and looks to see if there is any undigested matter in the gape of the youngster. If there is, this is picked out and swallowed. Once or twice a young bird threw up such large pellets of this undigested material that the old one had quite a difficulty in disposing of it; twice I saw three gulps

needed before the pellet was properly swallowed. I should very much have liked to examine one or two of these to compare them with similar pellets from the Spotted Flycatcher (*Muscicapa s. striata*) and Red-backed Shrike (*Lanius c. collurio*), of which I have handled a large number, but I never saw a youngster eject one except when the parent was at the hole. The food brought was of infinite variety, and it consisted partly of winged insects of several kinds and vastly different sizes; partly of caterpillars taken from the foliage of the oak trees and undergrowth; a large part was made up of larvæ of boring insects and boring caterpillars. I also saw woodlice brought. It may be mere accident, but the cock on the whole brought much larger stuff than the hen. I was greatly interested in his method of bringing large caterpillars when he had more than one. These were held across his bill with the ends projecting, squirming, on either side, the first one being right at the back of the bill; how did he pick up the second and third when the first was in position? In one case both birds handled, if one can use the term here, the catch carefully; this was when they got hold of a goat-moth caterpillar. They seemed both to dislike this beast very much and held it very lightly in the extreme tip of the bill. As soon as it was delivered they promptly wiped the bill several times on the bark outside the nest-hole and seemed very glad to be rid of it. Perhaps this caterpillar tastes as bad as it smells.

The number of meals worked out at about twenty to the hour at the nest where I had a hide. Sometimes it went considerably higher and it fell as low as sixteen. As they seldom brought less than three insects at a time, and only so few when these were big, this really means a lot more food than it seems at first sight. They very rarely brought single insects except in the case of the goat-moth and some of the big boring larvæ. Sometimes the birds took half-an-hour off, probably to feed themselves, but the greater activity displayed immediately afterwards brought the hour's total pretty well up to the average. At other times one of the birds would take half-an-hour off, and in this case the bird, male or female, that continued feeding kept on as usual and did not hurry. These intervals of absence were almost exactly thirty minutes. If something happened to upset a bird in the least when on the way to the nest it never kept the food long, but soon swallowed it. Each of them seemed able to give the alarm note whether it was carrying food or not.

NOTES

ROSE-COLOURED PASTOR IN THE ISLE OF WIGHT.

ON June 26th, 1925, a fine male Rose-coloured Pastor (*Pastor roseus*) was brought to me alive for identification. It was in beautiful plumage, quite unharmed, and had been captured in a garden at Bembridge under a net placed over raspberry canes.

On the next morning, prior to returning the bird to the owner of the garden where taken, I placed in the cage, in which I had accommodated it during the night, the following items of diet:—12 or 14 raisins; 5 small earth worms (washed and alive); 10 or 12 woodlice (alive); quantities (comparatively) of ripe apple and cold roast lamb—lean and fat—cut up fine; every scrap of which the bird devoured with great relish!

According to Kelsall and Munn (*Birds of Hampshire*, pp. 79-80) there are four (possibly only three) previous occurrences of the bird recorded for the Isle of Wight.

J. M. GOODALL.

WOOD-LARK IN PERTHSHIRE.

ON June 17th, 1925, I saw a Wood-Lark (*Lullula a. arborea*) near Dunkeld. There is some very suitable ground for the species to the north of the town, where I saw it; but unfortunately, being a common bird at my home in Herefordshire, I paid but little attention to it.

H. A. GILBERT.

WOOD-LARK NESTING IN NORTH LINCOLNSHIRE.

THERE is a certain district in North Lincolnshire so perfectly suited to the requirements of the Wood-Lark (*Lullula a. arborea*), that I used to search this place regularly for several years previous to 1922 on purpose for them. The only Wood-Larks I had seen in North Lincolnshire up to 1922 were at another spot some fifteen miles distant, viz. one on March 31st, 1919, and another on exactly the same spot on April 26th, 1921; both passing birds.

On May 28th, 1922, while motoring in the first-mentioned district, I saw a Wood-Lark flying some distance from the road and after watching for an hour or two found the nest containing young birds.

I had no opportunity of visiting this place again until May 18th, 1925. Very soon after arriving at the site I saw

two Wood-Larks feeding on the ground and watched them for a long time, but they apparently had no nest, though they behaved as if they might be going to have one shortly.

While watching these two another appeared and, after a few minutes' sitting on the branch of a Scots fir, dropped on to the ground. I went to the spot and flushed her off her nest containing one egg.

This locality is the most northerly in the British Isles that I know of for nesting, and it would be very interesting to know of any authentic instances of its breeding in Yorkshire, Lancashire, Cumberland and the Lake district at the present time. Howard Saunders mentions these places as irregular breeding localities.

W. S. MEDLICOTT.

WATER-PIPIT IN ESSEX.

ON November 27th, 1923, I came across a Water-Pipit (*Anthus s. spinoletta*) in a muddy creek that leads out to the marshes in the vicinity of Leigh. Rock- and Meadow-Pipits were at hand for comparison if required, but to my mind there is no need for confusion with the former, or for that matter with its Scandinavian race. The eye stripe, showing up as it does the greyish-brown ear-coverts, is amply sufficient for identification. I had the bird under the glasses for the best part of a half-hour. It acted like a stranger and did not seem to settle down in search of food.

A. SMITH.

ROOSTING HABITS OF TREE-CREEPER.

WITH reference to Mr. W. H. Thorpe's note on the roosting habits of the Tree-Creeper (*Certhia familiaris britannica*) (Vol. XVIII., pp. 20-22), I think that the following notes may be of interest if only to corroborate this habit.

In the drive of Bishop's Stortford College there are two Wellingtonias (*Sequoia gigantea*), one of which, particularly, is noted for its soft bark. On March 6th, 1925, a friend drew my attention to a small cavity some eight feet from the ground in this tree. The cavity—about $1\frac{1}{2}$ ins. deep and $2\frac{1}{2}$ ins. in diameter—was quite new and slightly fouled by droppings. I was not sure whether this was a "Creeper-Hole," but on March 15th we noticed a Tree-Creeper in the cavity. I went close up to the bird and although its eyes were open it did not move; its body was closely huddled in the cavity, but its head was projecting above with the beak slightly tilted away from the bark, its tail was flattened against the bark below the cavity. Thus its back, most of the wings, the tail and head, were visible.

On March 21st I noticed that the cavity was slightly wider and deeper, while it was more fouled with droppings, showing that it had been used regularly. At 6.15 p.m. on the same day I saw the bird roosting again, but this time its head was almost in the cavity and its body was huddled much closer, its beak was resting on the edge of the hole.

On March 22nd the hole was distinctly elongated. That night the bird was unfortunately stroked by torchlight and after that it deserted the cavity.

I examined the trunk of this tree carefully and found three other obvious "Creeper-Holes," while in the trunk of the second *Sequoia* I found five more disused cavities, while there were several doubtful cavities—mere scrapings in rifts of the bark. The cavities are not made with any preference for one side of the tree but are made indiscriminately between four and eight feet from the ground.

It is surprising that the Tree-Creeper should trouble to make a special roosting cavity, as there are any amount of seemingly suitable crannies in other trees, and at any rate the bird could enlarge one of the rifts in the *Wellingtonia*'s bark with less trouble, and this would include room for its head and tail.

R. W. HALE.

PIED FLYCATCHER IN EAST ROSS-SHIRE.

On May 21st, 1924, I saw a male and female Pied Flycatcher (*Muscicapa h. hypoleuca*) in east Ross-shire. They were evidently paired, but I failed to find their nest.

H. A. GILBERT.

EARLY ARRIVAL OF FIELDFARES IN NORFOLK.

On August 10th, 1925, I watched a flock of Fieldfares circling fairly low in the air over a field in mid-Norfolk. This is surely an early date. There were quite a number of them, and they once uttered one of their characteristic notes.

M. STUART CURTLER.

SWALLOW'S NEST ON A LANTERN.

In June, 1925, I discovered the nest of a Swallow (*Hirundo r. rustica*) in an unusual situation. It was built on a metal lantern hanging before the front door of a house near Doncaster. The nest was perfectly round and was secured at the edge to the chain by which the lantern was suspended. The young were successfully reared.

EDWARD A. ARMSTRONG.

[cf. Vol. I., p. 354 ; Vol. II., p. 208.—EDS.]

ALPINE SWIFTS IN KENT.

WHEN in Norfolk recently I came upon the record of an incursion of Alpine Swifts (*Apus m. melba*) during May, 1916.

Miss Margaret Barclay, of Hanworth Hall, Norfolk (eldest daughter of Col. H. A. Barclay, himself an ornithologist, and herself, of recent years, a keen watcher of birds), was during the war nursing at Hythe and lodged in a lofty house, the end of a row, overlooking the town and Channel. Among other lodgers was a Mr. O. B. Hake.

One evening in May, 1916, Miss Barclay on reaching her room heard a sound of scraping and fluttering against the glass of her open window, and found three very large brown Swifts with white undersides flattened against the lowest pane of glass. She gave them their liberty, noticing their "hugeness," their white undersides, how bulky they seemed in the hand, and when they flew their wide spread of wing.

Her fellow-lodger, Mr. Hake, found six of the same sort of bird in his room the same night. At my request the lady has written to Mr. Hake, who endorses her story, adding very little except that he remembers their size and brown backs and white underparts. He is not an ornithologist.

I may say that in the hall at Hanworth is a well-stuffed Alpine Swift (history unknown).

Miss Barclay was unaware of the value of her record at the time, nor knew that there was such a bird, having taken no especial notice of birds until after the war.

On her return home from nursing she recognised that the birds which had invaded her room at Hythe (Kent) were exactly like her father's Alpine Swift, having been *brown* above, not sooty, and *white* beneath. Also that their size, bulk and spread of wing exceeded any Swifts she had seen then, or since.

H. M. WALLIS.

WRYNECK IN DEVONSHIRE.

WITH reference to Mr. Curtler's note on the above (*antea*, p. 99)—I refrained from communicating with *British Birds* until I was in a position to offer something more definite than could be disclosed during your correspondent's visit of a few hours. I can now state definitely that there was only one pair of Wrynecks in this district and that they reared a brood in a hole formerly occupied by a Starling. I have no reason to doubt, from information received, that a pair bred last year within 100 yards of the same spot. I can find no previous record of the species having bred in Devonshire.

LEWIS R. W. LOYD.

SHORT-EARED OWL NESTING IN SUFFOLK.

IN May, 1925, I found the nest of a Short-eared Owl (*Asio f. flammeus*) in Suffolk. It was situated amongst bracken in cut-down woodland and contained nine eggs. H. A. GILBERT.

HOBBY NESTING IN BUCKINGHAMSHIRE.

AFTER an interval of three years, the Hobby (*Falco s. subbuteo*) has again appeared in the same oak wood in north Buckinghamshire where they bred in 1922. On that occasion, both the old birds and one of the young family came to a violent end. In 1925 a pair were shot during the second week of May, and shortly afterwards a second pair arrived, with every indication of breeding, frequenting an oak tree in whose upper branches was a Carrion-Crow's nest from which the owners had been shot at an earlier date. Three eggs were laid in the last week of May. The tree, not a very lofty one, was situated fifty yards in from the S.W. corner of the wood, which is an extensive one, and the nest was well covered from above with the leafy foliage. It is to be regretted that these birds also came to an untimely end. The three eggs, of a uniformly yellowish-brown mottled pattern and more oval in shape than those of the Kestrel, were lying on a layer of small twigs, no attempt having been made to line the nest previous to laying, they being then about ten days' set.

It should be stated that within one hundred yards of the nesting tree, Pheasant rearing was proceeding on a large scale.

H. L. COCHRANE.

FLEDGING PERIOD OF GOLDEN EAGLE.

A GOLDEN EAGLE'S nest containing two eggs was reported to myself and my friend, Arthur Brook, early in May, 1925. At our request a stalker kept the nest under observation and on May 24th he discovered—on visiting the nest—that one egg had already hatched and the other was hatching. Arthur Brook obtained photographs of the old birds and young at various stages; and was present when the first Eaglet (a cock) left the nest on August 9th. The remaining Eaglet (a hen) left the nest on August 11th. This is a period of exactly eleven weeks.

The cock Eagle was seen to brood the young and was photographed whilst so engaged.

H. A. GILBERT.

[This confirms H. B. Macpherson's observations.—EDS.]

INCREASE OF FULMARS IN CAITHNESS.

THE Fulmar Petrel (*Fulmarus g. glacialis*) has now extended its breeding area in Caithness to several other ranges of cliffs, besides Berriedale and Dunnet Head. I saw them in 1925 on Duncansby Head and St. John's Point. On the latter, young were still in the nest in the first half of August. According to local information, it was first colonized by three pairs in 1923.

H. A. GILBERT.

BLACK-TAILED GODWIT IN CUMBERLAND.

ON August 20th, 1925, I saw a Black-tailed Godwit (*L. limosa*) at Workington, Cumberland. As this is the first occasion of my noting the species I give details.

It was feeding by a pond in company with Lapwings and Redshanks, its warm brown colour forming a marked contrast with the latter. Its dark wings with white bar and black tail with white base were both well observed when it took flight.

M. MCKERROW.

BLACK-HEADED GULL NESTING IN THE SCILLY ISLES.

IN Clark and Rodd's "Birds of Scilly" (*Zoologist*, July and August, 1906) it is stated that "Though it has several times been seen in the summer months, there is no record of its having nested for the last sixty years," referring to a marginal note by E. H. Rodd in Montagu's *Dictionary of Birds* that this bird, the Black-headed Gull (*Larus ridibundus*), bred in Scilly in 1845. This naturalist writes also of two nests on St. Mary's in 1841. Although I have seen an adult pair or single birds in Scilly every summer I have spent there, and with Captain A. W. Boyd, six adults together on the pool of Bryher on June 30th, 1924, there is no record of the species nesting in the islands for eighty years, *i.e.* since 1845, until this year.

On June 2nd this year I found a nest of this species containing two eggs in the midst of a colony of Common Terns; these were still there on June 29th, evidently deserted, but had gone on July 12th. I saw no trace of the parents on any of my visits to the island, although I saw a single Black-headed Gull on St. Mary's on June 24th, and another off the eastern islands on July 4th.

H. W. ROBINSON.



LETTERS



LARGE NUMBER OF ROSE-COLOURED STARLINGS RINGED
IN HUNGARY.

To the Editors of BRITISH BIRDS.

SIRS,—In the spring of 1925, Hungary was invaded by a great immigration of Rose-coloured Starlings (*Pastor roseus*). This beautiful bird breeds in South Russia, Caucasia, Asia Minor and Turkestan, and spends the winter in considerable numbers in British India. Exceptionally, this bird also breeds in Hungary, when the locusts make their appearance there, as was the case in 1925. The Royal Hungarian Institute of Ornithology availed itself of this rare opportunity and had the young birds, which were hatched in stone-heaps, stone-pits, etc., marked by its officers. Nearly 2,700 birds were marked, and it is to be hoped that the percentage of returns will be in keeping with this large number. The inscription on the rings is "Ornith. Központ Budapest" and a current number of five ciphers, and is quite sufficient to make correct notification possible. Probably the birds will travel along the line—Hungary, South Russia, Caucasia, Turkestan, India, so that the marked birds will have to be looked out for in these countries. As all information touching this subject has great scientific value as a contribution to the investigation of bird-migration, all nature-lovers are herewith requested to devote their attention to this important ringing experiment, and especially to inform any of their friends living on the above-mentioned line, as well as the local press, so that this first experiment, which we have only been able to carry out at a great sacrifice, may have the result we are hoping for.

JAMES SCHENK.

REVIEWS.

A Comparative Hand List of the Birds of Japan and the British Isles.

By Masa U. Hachisuka (Cambs. Univ. Press). 1os. 6d. net.

THIS list will be of some interest to ornithologists of both the countries concerned, more especially as they are somewhat similarly situated at the extreme eastern and western ends of the Palaearctic region. The birds found in each country are listed side by side in systematic order, each with a scientific name and its original reference and a vernacular name. Abbreviations referring to "Breeding," "Exceptional visitor" and "Rare visitor" have been added where applicable, and this part of the work has not been carefully done so far as the British birds are concerned. The Siskin, for instance, is not marked breeding while the Brambling is, the Hoopoe is not, the Marsh-Harrier is, but Montagu's and the Hen-Harriers are not, and there are a good many other such instances, while the terms "Rare visitor" and "Exceptional visitor" appear to have been used indiscriminately and have been applied to birds of the same status.

It would have greatly added to the interest of the volume if the author had made some sort of comparative summary. Mr. Hachisuka uses 280 genera, and of these there are represented 157 in both countries, 70 in Japan and not in the British Isles, and 53 in the British Isles and

not in Japan. He allows 500 British forms (four more than we admit in the *Practical Handbook*) and of these, thanks largely to our rare visitors from the east, 109 are the same in both countries; but more important is the fact that 211 species are represented in both countries either by the same or different subspecies. There are only eighteen birds of the same subspecies which *breed* in both countries, and of these the Siskin is the only Passerine bird, the others being:—Short-eared Owl, Long-eared Owl, Golden Eagle (?), Mallard, Teal, Wigeon, Shoveler, Red-breasted Merganser, Bittern, Kentish Plover (?), Lapwing, Common Sandpiper, Red-necked Phalarope, Woodcock, Black-headed Gull, Leach's Petrel and Red-throated Diver. It will be noted that all of these are birds of such little plasticity that they have either not evolved subspecific differences or are at the most represented by only two or three subspecies in the whole of their wide range.

Some of the most notable diversities are to be found in the Flycatchers, Warblers, Wheatears, Auks and Game birds.

Notes on Sussex Ornithology. Being extracts from the Diaries (1845-1869) of Robert Nathaniel Dennis. Selected and Edited by W. H. Mullens, M.A., LL.B., and N. F. Ticehurst, O.B.E., M.A., F.R.C.S. (H. F. and G. Witherby, London.) 5s. net.

IN these days when the best parts of the Sussex coasts have been ruined, as regards Ornithology at least, by the erection of hideous bungalows, it is refreshing to read an account of what such places produced in the way of birds seventy years ago. Mr. Dennis, when he wrote his journals, little thought of what was to become of his hunting grounds. There is no doubt that the erection of these "Bungalow Towns" is gravely interfering with the bird life of our coasts.

For many years Sussex has been in need of an Ornithological Historian, as Borrer's *Birds of Sussex*, the only book dealing with the county as a whole, can never have been considered a complete survey even at the time of publication. With the appearance of the subject of this notice we have another greatly needed "underpinning" of the fabric which is in urgent need of restoration.

The discovery of these most interesting and important original Diaries on a bookstall near Covent Garden was a notable find, and they could not have passed into better hands for abstraction and publishing than those of the editors, who are to be congratulated on the successful manner in which they have dealt with them.

It is hardly necessary to pick out individual passages, the whole book must be read, and there is not a dull entry therein. It may be mentioned in passing, however, that even seventy years ago local Sussex specimens fetched large prices, as instance the "Lapland Finch," p. 63. Then as now the Hoopoe was a regular visitor, and the Bar-tailed Godwit arrived in numbers on the coast even as it does now in May, that is where it can at present find a portion of coast not overrun with bathers. Every man's hand was apparently even then against the Raven and Peregrine.

This book of 110 pages is printed on good paper in a clear type and is in every way up to the excellent standard of its publishers. May we express a hope that its editors will at no distant date produce a complete ornithological history of this, one of the richest counties of England as far as birds are concerned.

M. J. N.

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NORMAN F. TICEHURST, O.B.E., M.A., F.R.C.S., M.B.O.U.

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NOTES ON THE SUMMER HABITS OF THE
NORTHERN EIDER.

BY

FRANCIS A. MONTAGUE.

THESE notes are based upon the joint observations of Mr. C. S. Elton, of the Department of Zoology, Oxford, and myself, while members of the 1924 Oxford Arctic Expedition. I have to thank Dr. H. A. Baylis, of the British Museum, for the identification of various parasites. This paper makes no claim to be a complete, or even original, account of the breeding habits of the Northern Eider (*Somateria mollissima borealis*). It occurred to the writer that observations made by the same observers in one district, throughout the greater part of a single summer, might well go into greater detail and give a more comprehensive account of the matter, than scattered notes by a number of persons in different areas. Our results, therefore, are here summarized. It must be understood that all generalizations made apply only to our own observations.

Our observations included points on the north and west coasts of Spitsbergen, and on the coasts of North East Land: we arrived at the end of June, and sailed south from Green Harbour, Ice Fjord, early in September. We were thus enabled to cover the greater part of the Arctic summer.

WEATHER CONDITIONS.

The weather of 1924 was rather worse than the average. There was a fine sunny spell for about a fortnight, early in July; after that, mist and rain predominated, with occasional high winds. The temperature dropped quickly in the latter half of August, and snow fell at intervals, accompanied by sharper frosts than are usual at that date.

There was, however, no sign that the weather had been sufficiently unfavourable to prevent any of the Eiders breeding at all, as often happens in Greenland. There had been fine weather in June, though the season as a whole was much later than the average. Conditions varied locally to a surprising extent. They were generally a great deal worse in North East Land than elsewhere, but this had no very obvious effect on the birds breeding there.

ARRIVAL IN SPRING.

I am informed by one who has spent many winters in Spitsbergen, both as a trapper and in the mines, that in spring the Eiders usually appear off the coast as soon as the

ice starts breaking up ; an event normally occurring in April or May. When the break-up comes in March, birds seldom appear before April. The first birds to arrive are the drakes, with a few ducks among them ; the mass of the ducks appear later. At this time the sexes mingle freely round the shore.

We saw no birds of either sex between June 28th and July 2nd, while crossing the Barent's Sea.

TIME OF NESTING.

When we first arrived at Green Harbour, on July 2nd, Ice Fjord was practically free of ice ; but the small inlet of Green Harbour contained a considerable amount of broken bay-ice, which drifted out for the most part in the following week. Where steep, the shores were still fringed with little cliffs of compressed snow. On a piece of snowy tundra at the head of the inlet several pairs of Eiders were already sitting on eggs. About an equal number were not yet breeding, and were swimming in the open water, accompanied by many of the drakes from pairs already breeding. The males were in excess of the females ; a typical party would contain about five drakes to every duck. Wherever she went, an isolated duck would be followed by two or three drakes. There were also parties numbering up to twenty or so of unattached drakes, and pairs of birds which appeared to be mated, but had not yet started nesting. Mr. Elton noted similar conditions among the Eiders at Gip's Bay, in June 1921.

The courtship seemed to consist entirely of the drakes swimming round the ducks, spasmodically flinging the head and neck upwards, simultaneously uttering their well-known groaning call. This was the condition of affairs up to July 6th.

On Deer Bay Island, King's Bay, conditions were different. The bay was almost free of ice, the vegetation of the island was extremely rich, and the situation probably warmed by warm winds from off the encircling Blomstrand Glacier. The majority of the birds were already sitting upon full nests on the island, and a relatively small number of ducks were swimming with the mass of the drakes in the open water. This area was visited on July 7th.

Liefde Bay, on the north coast of Spitsbergen, was reached on the morning of July 9th. Ice conditions, naturally, were not so far advanced as at King's Bay or Ice Fjord. As we steamed up the coast a large field of loose bay-ice, recently drifted out of the bay, stretched far out to sea. Within the bay were many flocs drifting out on the ebb, and the shores were fringed with compressed snow. None the less the

breeding of the Eiders on the islets within the bay was considerably more advanced than further south. Practically all the ducks were sitting on full nests, and no signs of courtship were observed. As far as could be judged through glasses from the deck of the boat, this was also the state of affairs on the Norways Islands, further westward along the north coast, passed on July 8th.

The impression gathered was that the Eiders preferred, where possible, to wait until the fjords were nearly ice free to breed; this they could do on the west coast, owing to the longer open season. Lamont (*Yachting in the Arctic Seas*, London, 1876) observed in King's Bay that they did not breed on known Eider-holms while these were joined by ice to the mainland, but waited in nearby open water for the ice to break. But on the north coast, where a descent of the pack might cut short the available breeding time, and winter conditions start earlier, they begin breeding as soon as possible.

Exactly the same conditions are found with the Arctic Tern (*Sterna macrura*) occupying similar nesting places.

NESTING HABITS.

There is very considerable variation in the nesting site selected. While islands are preferred, the birds will occupy the mainland when these are not present. As mentioned, they bred on the tundra at Green Harbour; they also nested all over the coasts of North East Land, in the absence of ice, including even the east coast. This is of particular interest in that that coast is in many years permanently ice-bound, and is comparatively rarely free of ice for any length of time.

Of actual types of ground, thick vegetation, as found on Deer Bay Island, was most favoured; then came the thinner tundra-vegetation as found on the more northerly islets. Least favoured of all, and rarely used if any other site was available, was the bare shingle. This was the typical nesting site on Low Island, the Foster and Waiigats Islands, and on the coasts of North East Land. It was notable how on the island-groups in Liefde Bay an islet bearing tundra vegetation would be covered with nests, some of them even overflowing down on to the shingle beach; while a barer islet, separated only by a hundred yards or so of channel, would be entirely unoccupied. There did not appear to be any instinct for the monopolizing and defence of territory while nesting; I saw three nests within a square yard on a peculiarly favourable spot, and never saw any ill-feeling between birds nesting together.

Deer Bay Island was, very roughly, half a mile long by a quarter across, and rose to an elevation of about sixty feet. There were hundreds of nests upon it, and not one was more than a hundred and fifty yards from the shore. The altitude did not affect them, or the type of ground on the island; distance from the sea appeared to be the controlling factor. As far as I could see, there was a similar coastal belt round the Norways Islands. The lesser islets, only a few hundred yards across, were more generally covered by the nesting birds.

On luxuriant vegetation the nest of down is usually in a natural depression between the clumps; on tundra a distinct hollow is scraped out first. On two or three occasions I found nests composed entirely of fine moss, with no down in their make-up; possibly the owners had failed in an earlier attempt to breed, and being in poor condition had been unable to supply any more. Nests upon shingle were sometimes sheltered in driftwood, small portions of which might even be used for building purposes. These were the only cases in which we noted any nesting material other than down being used.

MOVEMENTS AND BEHAVIOUR OF THE DRAKES.

The drakes are the first to arrive off the coast, and soon repair to the breeding places. Here, for the first fortnight or so, of July they were in excess of the ducks. A small proportion—10 per cent. to 15 per cent.—would spend much time in the earlier stages of brooding sitting a few feet away from the nest, as though on guard. We did not see them brood at all; nor did they keep up this watch through the whole incubation period. The remainder gathered together into bachelor flocks of as many as a hundred strong on the surrounding water, and took no more notice of their mates.

In Liefde Bay their numbers began to lessen early in August, and by the end of the month only an odd drake or two remained. When we returned to Ice Fjord in the first week of September, they had all vanished from there too, though females and young were still numerous.

BEHAVIOUR OF DUCKS.

The ducks were close sitters, often remaining on the nest until an intruder was within a yard or two. This boldness was in part dependent on numbers; isolated birds left their nests a great deal sooner. On a few occasions a bird feigned injury, but this was unusual. As a rule they either walked quietly off, or flew directly out to sea. Unlike most of the

Spitsbergen birds, Mr. A. N. Rankin, our photographer, found them shy and hard to take actually sitting on the nest.

I never saw a nest in which the eggs had been covered in down, even when the birds had left unhurriedly. Very commonly, though, as a duck left her nest hastily, her "kick-off" had the effect of folding back the side of the nest behind her, so that it fell across the eggs, thus partly covering them. I do not think it could be called a purposive action.

It was also notable that when an Eider left her nest hastily, she extruded over the eggs a nauseous-smelling liquid, often taken to serve as a protection. But the only enemies to Northern Eider eggs, apart from man, are Skua Gulls and foxes. The latter do not occur on the islands forming the principal breeding haunts, being very averse to swimming; and against the former it is no protection at all. Moreover, when a disturbed bird left her nest unhurriedly, this ejaculation of fluid did not occur. It is, I think, simply an incidental result of sudden emotion stimulating the alimentary canal—a very familiar cause and effect.

CARE OF YOUNG.

Immediately on hatching, the young are led down to the shore and out into the water; for some days they keep to the shallows close to the shore. They were not observed to lead out the newly-hatched young on fresh water, after the manner of the King Eiders. This difference is due, I fancy, to the fact that the young Eiders are fed almost exclusively on marine molluscs. (See section on Food.) To my regret, I was never able to witness the actual passage of the young ducklings to water.

In Liefde Bay the young were first seen on the water on July 23rd; Dr. H. W. Florey noted them off the east coast of North East Land in the first week of August.

The precise number of young is hard to determine, as the Spitsbergen breeding places are so harried by trappers and men from the sealers that it is impossible to say for certain whether any nest holds a full clutch or not. Presumably undisturbed broods on North East Land coasts consisted of six or seven chicks.

After they have been a short time on the water, the care of the young seems to become almost promiscuous. Single ducks may be seen escorting as many as sixteen or seventeen ducklings; on the other hand, a couple of ducks may be fully occupied tending two or three youngsters. In some cases the appearance of things is of a party of ducks indiscriminately tending a slightly larger party of ducklings.

There were several sharp frosts in the latter half of August, which caused a considerable mortality among the young Eiders. Remains of them were also found in the stomachs of Skuas and Glaucous Gulls.

It seems possible that a heavy mortality of young consequent on these factors might play a part in producing this confusion of family relationships.

In the first week of September, both on the north and west coasts, ducks and young were flocking together in the deep open waters of the bays. In these flocks the young scarcely outnumbered the old birds ; the mortality among them was probably unusually heavy in 1924, owing to the late summer and early cold.

When we left Liefde Bay on September 1st, the ice-pack was a very few miles from the north-east coast, and would probably have closed down within a week or so. Open water would, of course, remain for some time longer within a land-locked bay such as Liefde Bay ; even so, it appeared that the winter would catch a considerable number of ducklings still unfitted for migration. We saw no Eiders of either sex on the Barent's Sea between September 6th and 10th.

ECOLOGICAL RELATIONSHIPS.

It has been said that the Eiders derive protection against enemies, especially Skuas, from nesting in close relationship with the Arctic Terns. Observation did not support this view. Though often nesting on the same islets, they did not always do so. On Deer Bay Island nesting was in full swing when only a few isolated pairs of Terns had begun breeding. An Arctic Skua which is flying above an islet jointly occupied by the two species is mobbed by the Terns, but I have never seen one really driven away. Repeatedly I have seen Skuas settled down sucking the eggs from an Eider nest in the middle of a Ternery, and noted that they received very little attention from the Terns while so occupied ; when they took wing again, they were swooped at repeatedly. In two or three cases in which Skuas carried off Eider eggs in their feet, the attentions of the Terns compelled them to drop their captures.

I have seen an Eider duck successfully defend her nest against the attack of a Skua ; judging by the small numbers of sucked eggs found in a colony, I think only uncovered nests are raided. From a little distance away, while the ducks were still undisturbed, I never saw a raid carried out ; but repeatedly, as soon as our closer approach drove the

Eiders from their nests, the Skuas came circling round us. On one occasion I noticed four of them resting on a spit of shingle which projected from one end of an Eider-holm. As I watched, two people appeared on the islet, disturbing the sitting ducks; at once all four Skuas rose in the air, and, regardless of the Terns, descended on the uncovered nests.

I do not think the Eiders derive any protection against Skuas from the Terns. We never saw a Glaucous Gull raiding nests, though chicks were found in their stomachs; probably their slower flight renders them more susceptible to the attacks of Terns.

FOOD.

A large number of stomach examinations were made on birds of both sexes and all ages. In every case the principal food was molluscan, and in every case about 70 per cent. to 80 per cent. consisted of a Chiton. Fragments of *Maia* were also found, and, less frequently, of *Conus*.

The food is broken up in the gizzard, and not, as sometimes stated, in the heavy bill. I have obtained whole Chitons, and a *Conus* shell over an inch in length, unbroken, from the gullets of freshly-killed birds.

Examination of droppings revealed a small but regular amount of vegetable food; but only once or twice were the ducks seen grazing. The grass consumed was *Glyceria vilfoidea*, which occurs on salt marshes near the coast.

PARASITES.

An Acanthocephaline worm was obtained from the small intestine of a female Eider shot on Reindeer Peninsula, Liefde Bay, on July 14th. It was identified by Dr. H. A. Baylis, of the British Natural History Museum, as *Filicollis boiulus* (Van Cleave, 1916).

This parasite has once previously been recorded from an Eider obtained in Spitsbergen. (N. Kostylev. "Sur les Acanthocephales de l'Eider (*S. mollissima* L.), *Parasitology*, Vol. XIV., p. 372, 1922.) It has also been obtained from the Murmansk Coast.

FURTHER NOTES ON THE NESTING OF THE FLAMINGO AND GULL-BILLED TERN IN THE CAMARGUE.

BY

WILLIAM E. GLEGG.

As a result of my experiences in 1924 in this district, which have been described in a series of articles (Vol. XVIII., pp. 90, 146, 202, XIX., p. 82), I decided to make another attempt to obtain information and photographs of the nesting of the Camargue Flamingos. I arrived at Les Saintes Maries, where I again made my headquarters, on May 31st, 1925, but on account of difficulties with the local authorities I was unable to commence serious observations for a few days. Fortunately, with the aid of the British Consul at Marseilles and a letter of introduction from M. Ménégaux, President of the Société Ornithologique de France, the obstacles were overcome, and on June 5th I was free to go where I liked. On this day I set out for the islands of the Etang du Valcarès, where we had found the eggs of the Flamingo in 1924. The Flamingos were present in great numbers. I estimated that a detached flock, which took flight on my approach, contained some two or three hundred birds, and a comparison of this flock with the main body, which was stretched out over as much of the large étang as could be seen, showed that the total population must be estimated in thousands. On reaching the island, where we had found the laying of some two hundred eggs in 1924, I found the nesting ground almost completely covered by water, in which there was a single Flamingo's egg partially submerged. Proceeding to the island immediately to the north, where we had found the laying of one hundred eggs in 1924, I found eight, two of which were partially covered by water, and six were lying within an area of a few square yards, but only two were sufficiently close together to be included in the same photograph. There were other signs of the presence of the Flamingos on this island, as there were many of the beautiful feathers scattered about. On a subsequent visit I saw another egg on this island, bringing the total found here to nine. Further islands in this direction were explored, but no more eggs or any signs of nesting were seen. Some days later I found that the mud on the more southerly island was no longer covered by water, the wind having changed. This disclosed further interesting evidence,

as I discovered a second egg and, what was more important, the broken shells of many eggs scattered over the mud. I have no doubt that I had before me the remains of one of these remarkable layings which had been deposited in this season. To a considerable extent my experiences of 1925 were a repetition of those of the preceding season. Further visits to this étang were devoted to searching the islands and shores eastwards, but although it may be said that all the southern portion of this étang and its islands were explored no further eggs or any signs of nests, old or otherwise, were found. A few birds were seen feeding on the eastern side of the étang, but the main body confined its attentions to the Etang de l'Imperial, by which name the south-west of Valcarès is known. During the various visits I made to the étang I always saw the Flamingos in great numbers, but I never saw anything to make me think that they were nesting. On the occasion of my last visit, June 16th, all the eggs were in position as originally found. So far as the conditions were concerned they appeared to be similar to those of 1924. There may have been rather more water in the étang, but it did not make any difference to wading.

Since the publication of my first article on this species, a contribution to the subject, entitled " ' Sur la nidification des Flamants en Camargue,' par A. Gibert et A. Ménégau," has appeared in *Revue française d'Ornithologie* (No. 191, pp. 67-72). M. Gibert states that an illustration which accompanies his article represents a view of the Etang de l'Imperial and that more than 350 nests of the Flamingo could be counted. This may be the photograph referred to by Mr. C. Ingram (*British Birds*, Vol. XVIII., p. 198). M. Gibert claims that this is proof that the Flamingos nest sometimes in the Camargue, although intermittently and with long lapses of time. Continuing, this author relates that during the previous two or three years Flamingos were scarce in the Camargue, and to such a point that they appeared to have abandoned it, but in 1924 they were very numerous, so much so that he hoped to find the nests. Being informed that the Flamingos had built their nests in the neighbourhood of the Radeau de Redouière, which separates the Etangs de Malagroy and de l'Imperial, some days after, on July 12th, 1924, he visited the place, but all that he could find were two Flamingos' eggs, lying on the mud, no nests being seen. M. Gibert further states that he was informed by " le garde-chasse de Bardouine," M. Millet, who visited the étangs daily, that he often found the eggs of

the Flamingo, but that he had never seen either the nests or the young. This author concludes by stating that the two eggs which he found contained the embryos of young birds. M. Ménégauz relates that in 1914 the number of Flamingos was very large, and that during a short stay in the Camargue during Easter, 1914, he saw numerous flights of this species between le Salin de Giraud et Beauduc, which, I may explain, is to the south and east of Valcarès. He continues that several people assured him that during the past winter, which had been very cold, more than 600 "Flamants gris tâcheté" had been killed, having been captured while their feet were imprisoned in the ice. These were the young of the previous year, which the inhabitants regarded as another species, of much greater superiority than the other from the culinary point of view. This is the extent of the contribution of M. Ménégauz.

Unfortunately, of what little information we possess regarding the Camargue Flamingos, some of the most important is second-hand and does not originate from ornithologists; however, it cannot be overlooked. During one of my explorations, having consumed all my wine, I was driven to seek liquid refreshment at a very isolated dwelling on the shores of Valcarès. I asked the hospitable owner if she had ever seen the nest of the Flamingo, and with pointed swiftness the answer came that they did not make a nest but laid their eggs on the ground. The significance of this remark is obvious. The idea seems to have taken root that the Camargue Flamingos were steadily being exterminated as the results of persecution. That these birds have suffered by the progress of agriculture and industrialism, and must eventually disappear if some of the étangs are not reserved for their benefit, cannot be denied. However, if the results of my two visits to the district are of any value, there is still ample seclusion for the Flamingo to rear many young. Mr. C. Ingram, in a letter (Vol. XVIII., p. 198), writes of these birds: "Their manner of laying in this haphazard way on the open ground seems to indicate that the birds have been so systematically and persistently disturbed that they no longer attempt serious nidification." I do not say that this may not be so, but I doubt if the evidence, on which to base such a statement, exists. M. Ménégauz shows that a large number of young Flamingos were reared in the Camargue as recently as 1913, and but for the very extraordinary circumstances would have survived. Probably conditions have not altered during the last twelve years.

The evidence, which we now possess suggests whatever the cause may be, that it is a habit of the Camargue Flamingos to drop their eggs on the mud and leave them there. Before concluding that this habit results from persecution, might it not be advisable to keep an open mind on the question, remembering how little we know of the habits of this bird as a species. The usual result of persecution is that the birds disappear altogether ; that has certainly been the effect on other species. Do we know that the Flamingo ever nested annually in the Camargue and also have we evidence of its annual numbers, say a hundred years ago ? My attention has been drawn to the following statement on this species in Mr. F. Finn's *How to know the Indian Waders*, p. 72 : " in the spring they are given to casually dropping their eggs about, without troubling to sit on them. So that the mere finding of eggs does not prove that the birds are necessarily breeding in a given locality."

Unfortunately, this statement is unsupported, but if this be true of the Flamingos of India, one must incline to the idea that this is a habit of the species, and we must look for some other cause than persecution. Variation in the amount of food available might well be a cause.

Much observation remains to be done on these Flamingos, but the task is one which should be undertaken by local observers.

GULL-BILLED TERN (*Gelochelidon n. nilotica*).—I am pleased to say that I found the colony thriving. Probably there were as many birds as in 1924, but the number of Common Terns had increased. The question of the sizes of the clutches engaged my attention, and a search resulted in the finding of six nests with five eggs and six nests with four eggs. This fully confirms my experiences of 1924 and suggests that it is a fixed function of the Gull-billed Terns of the Camargue to lay large clutches. Two of these clutches of five were photographed as evidence. The eggs of No. 1 clutch were all similar, but one was slightly browner than the others. In the case of No. 2 clutch the eggs were again similar, but two had a somewhat darker brown ground than the other three. My first visit to the colony was made on June 5th, when I found that quite a number of young had hatched out, but none were more than a day or two old. During subsequent visits, with many young about, there was much activity in the colony and I had plenty of opportunities of observing feeding. The only food that I saw brought consisted of small fish.

NOTES

"BRITISH BIRDS" MARKING SCHEME.

"RINGERS" are requested to send in to the Editor, not later than November 30th, their schedules, together with a list showing the number of each species ringed.

BIRDS' USE OF LAND-MARKS AS GUIDES TO NEST.

IN connection with Mr. Jourdain's interesting note (*antea*, p. 98) on birds making use of prominent land-marks, I may perhaps record an experience at Ravenglass. Having photographed a Ringed Plover (*Charadrius h. hiaticula*), a Little Tern (*Sterna a. albifrons*) and a Common Tern (*Sterna h. hirundo*) all I wished to, I emerged from the tent and removed to a distance of a few feet the most prominent adjacent land-mark—a branch in one case and the largest stone in others—to find that the birds on each occasion of their next few visits to the nest, returned to the land-mark; and only located the eggs with some degree of difficulty. JASPER ATKINSON.

JUNE MIGRATION IN THE BAY OF BISCAY.

ON June 13th, 1925, 4 p.m., in the Bay of Biscay, Lat. $45^{\circ} 50' N$. Long. $7^{\circ} 10'$ west, we observed at the same time a Red-backed Shrike (*Lanius collurio*), probably female, and a Turtle Dove (*Turtur turtur*) on board the R.M.S.P. "Andes." A light northerly breeze was blowing and no strong off-shore wind had blown for a week.

Allowing for errors, this position is at least 150 miles from the nearest land.

A. H. N. WILSON.

CHARLES E. BAKER.

RAVEN NESTING IN HERONRY.

IN 1924 a pair of Ravens (*Corvus c. corax*) nested in the middle of a Devonshire heronry which shall be nameless. The nest was in a stout pine at no great height, but the tree is a difficult one to negotiate.

On April 3rd I watched from a hide which I built in full view of the birds on the ground, and at this date one or both of the birds came again and again to the tree and stayed for intervals of half a minute to three or four minutes. Many Herons' nests were only a few yards away, and usually all birds returning to them were sorely worried by the Ravens in the air, but when once they had perched the persecution

stopped. I discovered one fresh Heron's egg with a big hole and sucked, but, judging from the number of young birds later on, the Heronry in general appeared to suffer very little. Some years back a Carrion-Crow (*C. c. corone*) nested very close to this spot and was probably a more dangerous neighbour. Once I watched a Raven mount slowly up a very tall pine to a nest at the extreme top; just as he reached the edge, a gaunt grey figure arose in a formidable crouching position, and the Raven started back with a most comical ejaculation.

The young Ravens were still in the nest and very noisy on May 6th, and four were reported safely fledged. But at this stage they are a very easy prey to the gunner, and a fortnight later I found two of their corpses at the foot of a neighbouring tree.

This year (1925) the same nest was again used, and a brood got off undisturbed, but I fear that they must have come to grief once more. In the second week of July the owner of the property told me that he had put the birds out of the same tree and asked me if it was possible they had an occupied nest at that date. I thought this interesting enough to investigate, and visited the tree a day or two later with a friend. Though we saw and heard nothing of the Ravens, he had come prepared for a climb, and with a rope he made the ascent. Strangely enough, when he was half way up, both Ravens suddenly appeared and made a hostile demonstration, flying almost at him. They sheered off almost as quickly as they had come and we saw no more of them. The nest proved to be quite empty. It was flattened out and much more "white washed" than when it contained the Ravens. I have no doubt that Herons had used it for a second brood, and my impression is that there used to be a nest there before the advent of the Ravens. A curious feature of the nest was that about three feet above it there was a slight platform of sticks which, when the young were in the very exposed nest, undoubtedly sheltered them from the sun for several hours in the day. I have been informed of another nest in a tree, only about a mile distant from this, which was occupied by Ravens this season. There is at least one good inland cliff in the vicinity which seems to offer facilities.

A. H. MACHELL COX.

HOODED CROW IN MONMOUTHSHIRE.

A HOODED Crow (*Corvus c. cornix*) was shot on October 12th, 1925, near Undy, a hamlet on the right or north bank of the

Severn. It was feeding with some Rooks (*Corvus f. frugilegus*), and was the only one of its kind seen.

The estuary of the Severn at this point is about five miles wide, and subject to very high tides, which leave large expanses of mud and sand at low water—good feeding ground for Hooded Crows.

I have been looking out for this bird for many years, and have made many enquiries, but this is the first I have come across, and I do not know of any previous record for the county.

R. C. BANKS.

GREENFINCH MIGRATING BETWEEN AUSTRALIA AND NEW ZEALAND.

ON August 30th, 1925, while *en route* between Wellington, New Zealand, and Sydney, Australia, and 500 nautical miles from the latter place, a Greenfinch (*Chloris chloris*) came on board at 4.10 p.m.

The Greenfinch is firmly established in both countries, but is commoner in New Zealand, and the period is, of course, early spring.

A. H. N. WILSON.

RED-BACKED SHRIKE'S LARDER.

My friend, Mr. H. A. Greatorex of Witton, near Norwich, found an unusually large larder of a Red-backed Shrike (*Lanius c. collurio*) this summer. It was situated in a large, wild garden. A lot of small thorn trees had been cut down and thrown in a heap on the ground. The heap extended for several yards and was about two feet high. Fixed on thorns on the top of the heap and scattered in small groups all over it were the following:—5 shrew mice; 1 large frog; 2 small birds (apparently young Whitethroats); 2 bumble bees; 1 small beetle.

Mr. Greatorex kept a watch on the larder, nearly all of which was consumed, with the exception of one or two dried up remains.

N. TRACY.

GRASSHOPPER-WARBLER NESTING IN NORTH LINCOLNSHIRE.

IN a certain locality in North Lincolnshire I have for some years past heard or seen a Grasshopper-Warbler (*Locustella n. naevia*) occasionally.

On May 17th, 1925, at 6 p.m., I saw a small bird flit over the heather for a few yards and drop into a thick bush. I watched and in a minute it crept out and sat, still and silent, in the bottom branches watching me. It then dropped into

long heather under the bush and I had to beat it out in order to identify it for certain. It had run in the heather four yards and was undoubtedly a Grasshopper-Warbler.

I returned the next day and tapped the low bushes near the spot and heard a slight rustle from one ; looking right into the bottom I saw a small thing like a brown mouse running on the bottom and the well-hidden nest containing five eggs.

W. S. MEDLICOTT.

UNLINED NEST OF WILLOW-WARBLER.

IN 1925 I watched a Willow-Warbler (*Phylloscopus t. trochilus*) building its nest in a much frequented spot. It brought off a brood. The nest had not a single feather in it, though I examined it minutely. Perhaps this is not really so uncommon as it is in my experience ? A. H. MACHELL COX.

[Out of hundreds of nests of this species examined, only one lacked the feather lining. This was in a wood in S.W. Derbyshire and was built of bracken without a single feather, but other nests in the same wood were normally built.—F.C.R.J.]

EARLY ARRIVAL OF REDWINGS IN DEVON.

ON August 30th, 1925, near Budleigh Salterton, I saw a party of eight Redwings (*Turdus musicus*) flying overhead in a south-westerly direction. They flew low and the evening sun shone on their red flanks, so there was no mistake. This is a very unusual date for South Devon.

W. WALMESLEY WHITE.

GREAT SPOTTED WOODPECKER AND NUTHATCH IN SAME TREE.

IN 1924 I discovered a Great Spotted Woodpecker (*Dryobates major anglicus*) and a Nuthatch (*Sitta europæa affinis*) nesting in the same tree, the holes being in different boughs but only about fifteen feet apart ; a Blue Tit (*Parus cæruleus obscurus*) also occupied an old Woodpecker's hole between these.

In 1925 both Woodpecker and Nuthatch again brought off broods from the same holes, and it will be interesting to see if Mr. Owen's experience of the habits of the Woodpecker will be confirmed next year. The tree is an oak.

A. H. MACHELL COX.

SHARE OF SEXES IN INCUBATION OF THE GREAT SPOTTED WOODPECKER.

WITH reference to Mr. J. H. Owen's article (*antea*, p. 125) on the nesting of the Great Spotted Woodpecker (*Dryobates major*

anglicus), I see that he says that he does not know if the male bird takes any part in incubation. A few years ago, in Hampshire, I spent some time watching a Great Spotted Woodpecker's nest, and on several occasions I saw one of the birds fly up to the tree and settle on the opposite side to the hole and tap loudly two or three times, when the sitting bird flew out of the hole and the new arrival worked round the tree and slipped in and remained for some considerable time.

N. TRACY.

THE INCUBATION- AND FLEDGING-PERIODS OF THE SPARROW-HAWK.

Two nests of the Sparrow-Hawk (*Accipiter n. nisus*) were found when the birds were building them, and as the eggs were laid, with one exception on alternate days, they were marked with the date of laying in order to discover in what order they hatched. Each clutch consisted of four eggs, but in one the fourth was infertile ; in each the first egg laid was the third to hatch, in one nest about forty-six hours, in the other about twenty-six hours, after the second and third eggs laid had hatched. The second and third eggs hatched on the same day, but unfortunately it was not discovered which egg hatched first.

PAIR NO. 1. INCUBATION BEGAN ON MAY 18TH.

Egg No.	Laid.	Chipped.	Hatched.	Incubation Period. Days.	Young left the nest.	Fledging-Period. Days.
1	May 13	June 22	June 24	37	July 21	27
2	" 15	" 20	" 22	35	" 21	29
3	" 17	" 20	" 22	35	" 21	29
4	" 20		Infertile			

Some information was obtained regarding the chipping-period of these eggs, but it was only determined approximately, as in every case when the nest was visited the eggs had been chipped a few hours and the nestlings hatched two or three hours. On June 20th at 6 p.m. eggs Nos. 2 and 3 were chipped, eggs Nos. 1 and 4 unchipped. At 10.45 a.m. on June 22nd both these nestlings were out, the down on one still wet ; the chipping-period was about forty hours. Egg No. 1 was chipped at 10.45 a.m. on June 22nd and hatched on June 24th at 9.15 a.m., chipping-period under forty-six hours.

PAIR NO. 2. INCUBATION BEGAN ON JUNE 4TH.

Egg No.	Laid.	Chipped.	Hatched.	Incubation Period, Days.	Young left the nest.	Fledging Period, Days.
1	May 31	July 6	July 7	33	August 4	28
2	June 2	?	" 6	32	" 4	29
3	" 4	?	" 6	32	" 4	29
4	" 6	July 7	" 8	32	" 4	27

On July 6th at 9 a.m. eggs Nos. 2 and 3 were almost hatched and egg No. 1 had been chipped for several hours ; six hours later the two nestlings were out. At noon on July 7th the nestling had just emerged from egg No. 1, the chipping-period being considerably over twenty-seven hours ; also egg No. 4 was well chipped, and hatched the next day.

Another nest was found when it held one egg ; other four eggs were laid but unfortunately none were marked with the date of laying. One nestling was hatched a day before the next two, and in the table below it is assumed this nestling hatched from egg No. 4 and that eggs Nos. 2 and 3 hatched on the same day, followed by eggs Nos. 1 and 5. This assumption is strengthened by the fact that when incubation began on May 14th egg No. 1 was six days old and egg No. 2 four days old.

PAIR NO. 3. INCUBATION BEGAN ON MAY 14TH.

Egg No.	Laid.	Chipped.	Hatched.	Incubation Period, Days.	Young left the nest.	Fledging-Period, Days.
1	May 8	June 16	June 18	35	July 12	24
2	" 10	?	" 16	33	" 12	26
3	" 12	?	" 16	33	" 12	26
4	" 14	?	" 15	32	" 12	27
5	" 16	June 18	" 20	35	Disappeared 29th	by June

The exact chipping-period of egg No. 5 was discovered. On June 18th at 10 p.m. it was just beginning to chip, and at 12.45 p.m. on June 20th the nestling emerged from the egg, the chipping-period being thirty-eight and three-quarter hours.

With regard to the fledging-period, in each case the whole brood flew from the nest-tree on the dates mentioned, and although one or two young in each brood were not fully feathered it was not possible to differentiate these from the

rest, hence the fledging-period is based on the dates when the eggs hatched and when the brood left the nest-tree.

R. H. BROWN.

[For previous notes on incubation-period see *Zoologist* 1894, p. 341; 1910, p. 11, and *B.B.* VIII., p. 193; XV., p. 74, etc. For fledging period see *Zoologist* 1909, p. 466; 1910, p. 11.—F.C.R.J.]

PUFFIN IN BEDFORDSHIRE.

THE remains of a young Puffin (*Fratercula arctica*) which had been partially eaten by rats were found in Woburn Park on September 23rd, 1925. The weather had been very stormy.

M. BEDFORD.

ROSE-COLOURED STARLING IN HAMPSHIRE.—Mr. A. P. Martin states (*Field*, Aug. 20th, 1925, p. 338) that he watched a *Pastor roseus* in Hampshire (locality not mentioned) on August 9th, 1925.

GOLDEN ORIOLE IN KIRCUDBRIGHTSHIRE.—Mr. R. L. Tait states (*Scot. Nat.*, 1925, p. 100) that a dead *Oriolus oriolus* was picked up at Gatehouse on May 6th, 1925.

HAWFINCH IN SCOTLAND.—In an article on this subject (*Scot. Nat.*, 1925, pp. 39-45) Mr. J. Kirke Nash traces the history of the Hawfinch (*Coccothraustes c. coccothraustes*) in Scotland, and in this we note some omissions, notably the breeding records from Dumfriesshire (see H. S. Gladstone, *Birds of Dumfriesshire* and *Notes on the Birds of Dumfriesshire*). At the end of the article Mr. Kirke Nash describes his experiences in 1921 in East Lothian, where he found the Hawfinch breeding.

BLACK-HEADED WAGTAIL SEEN IN DUMFRIESSHIRE.—Mr. W. Stewart records (*Scot. Nat.*, 1925, p. 107) that a Wagtail with a jet-black head and brilliant yellow breast was watched by him and his son in good light and at short distance with the assistance of powerful binoculars on June 14th, 1925, in Upper Nithsdale, a short distance up the Spango Water. That this was an adult example of *Motacilla flava feldegg* there can be no reasonable doubt. The bird has never been recorded for Scotland before and only four or five times in England.

CRESTED TIT IN LANARKSHIRE.—Mr. W. Stewart (*Scot. Nat.*, 1925, p. 46) states that a Crested Tit (*Parus cristatus*)

came several times in February, 1925, to some fat meat hung out for birds at Airdrie.

BEAN-GEESSE IN OUTER HEBRIDES.—Mr. G. Beveridge states (*Scot. Nat.*, 1925, p. 58) that two Geese shot on February 28th, 1925, at Lochmaddy, North Uist, have been identified by him, as well as by Mr. P. D. Malloch of Perth, who stuffed them, as Bean-Geese (*Anser fabalis*). This is only the second authentic occurrence of this species in the Outer Hebrides.

RUDDY SHELD-DUCK AND RED-CRESTED POCHARD IN MIDLOTHIAN.—Messrs. D. Hamilton and J. K. Nash state (*Scot. Nat.*, 1925, p. 68) that a single example of *Casarca ferruginea* frequented Duddingston Loch, near Edinburgh, from October, 1924, to March 29th, 1925. The bird, which was strong in flight and wary, appeared to be a wild one. On the same loch Mr. C. G. Connell (*t.c.* p. 21) identified a Red-crested Pochard (*Netta rufina*) on December 21st, 1924, and this was subsequently confirmed by Mr. Kirke Nash on the 28th.

RED-NECKED GREBE IN LEICESTERSHIRE.—Mr. W. H. Barrow informs us that a male *Podiceps g. griseigena* was picked up alive on the outskirts of Leicester early in March, 1924. It is now in the Leicester Museum.

ALBINISTIC LAPWING IN LEICESTERSHIRE.—Mr. W. H. Barrow writes that a *Vanellus vanellus* was picked up at Wanlip on January 2nd, 1925, having the parts normally black coloured red-brown, while the green portions of the plumage are cream. He suggests that it may be the same bird as seen by Mr. J. S. Elliott in Bedfordshire in February, 1924 (Vol. XVIII., p. 304).

GREENSHANK NESTING IN SCOTTISH LOWLANDS.—The Editors of the *Scottish Naturalist* announce (1925, p. 107) that they learn from a reliable source that the Greenshank (*Tringa nebularia*) nested in 1925 and probably in 1924 on high ground in the Lowlands. The 1925 nest was unfortunately deserted owing to interference by sheep or shepherds; and one of the eggs has been examined by the Editors, who state that this is the first record of the nesting of the Greenshank south of the Perthshire Highlands, though rumours of its having done so have been current for several years.

GREY PHALAROPE IN NORFOLK.—Miss F. Collins writes that she watched a *Phalaropus fulicarius* on a pond between Salthouse and Sheringham on September 19th and 20th, 1925.

FÆROE SNIPE at FAIR ISLE.—Surgeon Rear-Admiral J. H. Stenhouse records the occurrence of a specimen of this race of the Snipe (*Capella g. faerocensis*) shot at Fair Isle on December 24th, 1923, and now in the Royal Scottish Museum (*Scot. Nat.*, 1925, p. 58).

IVORY-GULL IN YORKSHIRE.—Mr. F. Snowdon records (*Nat.*, 1925, p. 149) that a *Pagophila eburnea*, which was much emaciated and tame, was seen in Whitby Harbour on March 2nd, 1925, and watched for five days. It was eventually caught on March 7th and died in captivity. The bird proved to be a male in first winter plumage.

DEMOISELLE CRANE IN YORKSHIRE.—An adult female *Anthropoides virgo* is recorded by Mr. F. Snowdon (*Nat.*, 1925, p. 148) as having been shot at Robin Hood's Bay on July 5th, 1924. It will be remembered that Dr. B. B. Riviere watched a Demoiselle Crane in north Norfolk on June 17th, 1924 (*Brit. B.*, Vol. XVIII., p. 83), and it is of course possible that the Yorkshire bird was the same individual.

LATE NEST OF CAPERCAILLIE IN PERTHSHIRE.—Lord Scone informs us that a Capercaillie (*Tetrao u. urogallus*) hatched out a clutch of seven eggs at Lynedoch, Almondbank, 350 ft. above sea-level, during the last week of July, 1925. The eggs would have therefore been laid at the end of June. J. G. Millais states that on high ground some birds do not nest till June, but information on the subject is very scanty.

INSECT FOOD OF PTARMIGAN.—Mr. P. H. Grimshaw has found in the crops of two Ptarmigan (*Lagopus m. millaisi*), shot in Ross-shire, large numbers of the remains of a species of Crane Fly (*Tipula*). (*Scot. Nat.*, 1925, p. 69.)

LETTERS.

THE MARSH- AND WILLOW-TIT IN CUMBERLAND.

To the Editors of BRITISH BIRDS.

SIRS,—The only method of establishing the identity of these species is to have specimens examined by some competent authority as Mr. T. L. Johnston has done in the case of the Willow-Tit (*antea*, pp. 96–97); identification based solely on breeding-habits is not sufficient, as the following record proves. From 1916 onwards there are various references in my diaries to "black-capped Tits," but to which species they relate I could not say. The heads of these Tits are invariably described as "jet-black" (like the black crown of a male Blackcap) and the alarm-note, when heard, as a "loud and penetrating 'tay-tay-tay.'" In one locality where these Tits exist (and no Woodpeckers have been seen or heard) several drilled holes have been found in dead alder and willow stumps, but no nest found in them.

In this same locality on June 2nd, 1923, a nest of five Tits was found about four inches inside a natural hole in an alder, and the hole showed no signs of having been worked. Both adults were seen, described in my diary as having "jet-black crowns, alarm-note of 'tay-tay-tay.'" After the young had flown the nest was examined and consisted entirely of matted hair-lining. That this case is not exceptional is proved by Mr. Heatley Noble's account (Vol. VII., p. 198) of Tits which, caught on nests in natural holes and drilled holes, were examined by Dr. Hartert and all classified as Marsh-Tits. R. H. BROWN.

[Further evidence with regard to the respective nesting habits of the two species is of course still desirable, but we are unable to accept Mr. Brown's inferences. He proves that the Marsh-Tit nests in his district of Cumberland and his evidence suggests that the Willow-Tit does also. He produces no evidence, however, that the drilled holes were in fact the work of Marsh-Tits. Heatley Noble's evidence, to which Mr. Brown refers, consists of *one* bird obtained from a drilled hole and proved to be a Marsh-Tit, but it was not taken by himself, nor did he see the hole or describe the nest.—EDS.]

THE SONG AND COURTSHIP OF THE ROBIN.

To the Editors of BRITISH BIRDS.

SIRS,—Mr. J. P. Burkitt in his fourth paper on the Robin (*antea*, pp. 120–124) has some remarks on the above subject, and as he states that "I mention these points because I have seen the reverse recently assumed," it would appear he is referring to my notes on the Robin (*antea*, pp. 61–62). He says:—

(1) "The rare occasions of female song with me have been mostly on occasions of hostility. It is quite incorrect to assume that it necessarily means courtship with the visitor." This may generally be so, but of the two instances I gave of presumed female song, that of November 12th appeared, from the behaviour of the birds, to be courtship.

(2) "Neither is it correct to assume that when one Robin perches close under another which is singing on a tree, that the former is a female to which the latter is singing." I agree with this statement and the deduction that it is hostility, having seen several instances of it myself, and my few notes on courtship are not based on this assumption.

(3) "Nor again, that one Robin swaying its head from side to side facing another in the well-known attitude is courtship." This may be so, but in the case I gave the bird was also singing vigorously all the time and this, together with the behaviour of both birds and the season (mid-February), made me conclude it was courtship.

R. H. BROWN.

HOBBIES IN BUCKINGHAMSHIRE.

To the Editors of BRITISH BIRDS.

SIRS,—Capt. H. L. Cochrane writes "*It is to be regretted that these birds also came to an untimely end,*" a sentiment with which I feel sure most people will agree. But the occurrence in the North Buckinghamshire oak wood, I contend, calls for something stronger than mere expressions of regret. I should like to utter a protest against the wanton slaughter of these seven Hobbies. Why were they shot? We are given to understand that the reasons for their death were

because "*Within one hundred yards of the nesting tree, Pheasant rearing was proceeding on a large scale,*" but we are not told that the Pheasants had suffered from the Falcons. The two pairs of Hobbies which arrived this May seem to have been shot at sight, immediately after their arrival, a time of year when they are not likely to trouble the rearing field, as the Hobby is one of the latest of nesters, the young not being hatched usually till well on in July. But does the Hobby trouble the rearing field? Our best observers say it seldom if ever does, for this Falcon is chiefly insectivorous, feeding also on small birds. Here is my experience of a pair I had under close observation. These birds bred for eight seasons in succession in the same wood, and I found that the castings and remains of quarry taken consisted entirely of small birds, Pipits, Larks, etc., and once I found the remains of a Swift, but never was there evidence of any game bird having been killed. The present-day keeper is, as a rule, possessed of most accurate knowledge, but it has to be remembered that he has but one object in view, the preservation of game birds, anything which *may* affect them he deals with, and he can scarcely be blamed for this attitude if his employer has not taken the trouble to give him definite instructions with regard to the preservation of certain species.

It is to be hoped that the owner of the estate in question will regulate the proceedings of his keepers and prevent a recurrence of the slaughter of our most beautiful Falcon.

R. E. COLES.

October 12th, 1925.

BREEDING HABITS OF THE AVOCET.

To the Editors of BRITISH BIRDS.

SIRS,—I am surprised to find that Prof. Huxley in his most interesting article on the Avocet (*Recurvirostra avosetta*) (*antea*, p. 88), lays so much emphasis on the peaceable temperament of the bird. When in June, 1923, Mr. J. D. Clarke and I visited and photographed the Avocets on the Prins Hendrik Polder we were both struck by their quarrelsome nature. I find in my notes of the 17th of June the following: "Avocets are quarrelsome and have quite serious 'scraps.' They try to hit with the legs and feet. I have seen them 'stoop' at feeding Redshanks (*Tringa totanus*) and try to strike them with their feet as they passed over." And again: "The old birds are intolerant of other species, especially near their young, and will drive Redshanks away." Also, as I recorded in *British Birds* (Vol. XVII., p. 104), I have twice observed Avocets chasing Spoonbills.

During my visit, although there were some nests with eggs and many young about, I observed no "injury feigning," and whereas Prof. Huxley found the bird "not at all noisy," I noticed a considerable clamour. No doubt the different months in which we observed the birds may account for the difference in the records.

As regards the feeding habits, my observations agree with those of Dr. Longstaff, and in common with other recorders I remarked the solicitude of the old birds for the young. EDWARD A. ARMSTRONG.

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THE COURTSHIP OF THE TEAL.

BY

HENRY BOASE.

THE display of the Teal (*Anas c. crecca*) has an appealing daintiness about it ; there is more grace and less of the bizarre in the performance than in the case of the other species the writer has watched. There appears also to be more dependence on the colour effect in the plumage, particularly the display of the contrasting areas of black and gamboge-yellow of the tail.

As in other cases there is a tendency for the more formal display to become almost a game or tournament, for a number of males take part in a water dance where the interest appears to lie more in one another than in attracting by direct appeal one or other of the watching females. When several females are present, generally one becomes the centre of interest while the others receive no attention. The males swim round her in procession (the female meanwhile preening with an air of complete detachment), turning now this way, now that, spinning round and so reversing the direction of motion, now one, now another, making the formal display, not necessarily to the female—indeed, more often to a rival male. Or the female herself may take the lead when the males follow her, not in line but on either side, endeavouring as it were to keep well in view and take the opportunity to make formal display when the female turns aside towards one or other of the pursuing males. Sooner or later the procession breaks up in confusion and males display to one another or ardent rivals spar.

The formal display opens in the manner of the Mallard, the bill being dipped as the bird rises on the water exposing the breast. The tip of the bill is drawn up the centre of the breast with arched neck, the bird settling once more on the water, and the act finishes with a momentary pause with the bill somewhat raised and the neck more or less extended. This particular form was seen early in the spring, in March, when a group of Teal were playing on a small patch of open water among the ice on a hill loch. Later on, in mid-April, the display was somewhat different in detail. Most noticeable also was the greater "spring" of the performance. So rapid was it that although seen twenty times in ten minutes or so, it proved almost impossible to determine with certainty the details of the closing movement, where it appeared, instead of the neck being extended, it was retracted, the

head swinging back as the neck shortened and ending with the bill inclined upwards, while the final motion became an upthrust of the hind portion of the body, recalling vaguely the similar action of Goldeneye. In some cases, the neck was stretched out with the head in line almost immediately after the finish described, but this was not clearly part of the ritual, though suggesting perhaps a connecting link to the first form described.

There was still another and quite distinct form of display given, and this was much more prominent on the occasion of watching in March. It followed almost in every case immediately after the display already described and consisted of what might be termed a sudden spasm, when the bird is transformed in an instant from a normal swimming attitude to a posture with stiff upright neck, bill held level or rather depressed, the head feathers erected, giving the head an apparent increase in size, tail erected and appearing pointed, all just for one tense moment, and then return to normal.

There is also a quieter side to the Teal's courtship, perhaps it may be, in fact, the time of actual selection, and those formal games in open water may be merely jousting with rivals attracted to a mated female. This indeed was seen at the April watching and the male took every opportunity of attacking the intruders by threats and rushes.

In the quiet days of early spring, in the shelter of the short sedges just showing green or among the grass tufts on the flooded bog, little groups of Teal coquette in peace. A female preens in an unconcerned way, and a gay male swims by, pauses, glances back, and gives a gentle shake to his tail. He turns about and paddles by again, pretending that the female at hand is of no interest, stretches himself deliberately and turns his head from side to side so that the sun gleams on his burnished crown, settles again with an air of pleased conceit, and glances back with a view of measuring the impression. Perhaps it is favourable and he turns about to give that ceremonial bow which opens the first display, acted slowly, however—no haste and almost always that self-satisfied wriggle of the tail as he settles again. Sometimes the tail is jerked up, just flicked, and then he takes another turn to and fro, watching the female first with the one eye and then with the other, preferring, it would seem, a position with his tail towards her, possibly because he realises in quite a vague way that the patches of black and gamboge-yellow form a striking portion of his delicately pencilled plumage.

The female may go on preening, having no interest in the passers-by : she may dart at the male as though to drive him away or she may elect to go with him. Perhaps it was all show after all and no romance in that back glance of the male, just stretching his neck in the hope of seeing something edible, yet it seems so natural and amusing to watch ! Probably in most cases the first male is joined by others and the game becomes more elaborate, ending perhaps by the party going out into open water where the formal display or dance is held.

In connection with the courtship, a bobbing motion of the head and neck is sometimes used. It seems as it were a mode of address of the male to the female, and is used by the mated bird when he is pottering around feeding with his mate apart from the parties which may be displaying or resting. This action was also seen when a rival had exerted himself to rob a male of his mate and was attacked by the injured party. The female decided to test matters and departed, followed instantly by the contestants, and after a turn up and down the loch, returned to the same patch of open water and was there rejoined by one of the males (which, of course, could not be determined) who bobbed vigorously as he approached her.

Teal at times show great excitement, plunging and splashing, darting hither and thither, diving completely at times, without any definite reason for this behaviour so far as observation can determine. This habit has seemed more common from July onwards and does not appear to be connected with the display. A similar behaviour has been seen in the case of Mallard and Shoveler but, as in the case of Teal, the cause remains uncertain.

RECOVERY OF MARKED BIRDS.

RAVEN (*Corvus c. corax*).—23,442, ringed at Glen Afton, Ayrshire, as a young bird, by Mr. D. MacWatt (for Mr. E. Richmond Paton), on April 16th, 1924. Reported at Letterick Hill, Dunscore, Dumfriesshire, in May, 1925, by Mr. John Dryden.

CARRION-CROW (*Corvus c. corone*).—72,867, ringed at Burton, Cheshire, as a nestling, by Mr. A. W. Boyd, on May 4th, 1924. Reported at Saulton, near Wem, Shropshire, in May, 1925, by Mr. W. Ashton, per the ringer.
71,754, ringed at Malvern, Worcestershire, as a nestling, by Mr. P. E. A. Morshead, on May 16th, 1924. Reported at Bank Farm, West Malvern, on May 20th, 1925, by Mr. Stephen Ballard.

ROOK (*Corvus f. frugilegus*).—75,838, ringed near Huddlesceugh Hall, Cumberland, as a nestling, by Mr. R. H. Brown, on April 30th, 1925. Reported at Alston, Cumberland, on July 12th, 1925, by Mr. J. Fawcett.

STARLING (*Sturnus v. vulgaris*).—56,861, ringed at Strathblane, Stirlingshire, as a nestling, by Col. P. C. Macfarlane, on May 16th, 1923. Reported at Campsie, Lanarkshire, on May 31st, 1925, by Mr. G. Griffiths. The ring only was found in a Tawny Owl's nest.

A.5,526, ringed at Torrance, near Glasgow, Stirlingshire, as a young bird, by Mr. J. Bartholomew, on May 17th, 1923. Reported at Balmore, West Stirlingshire, in June, 1925, by Mr. W. Lennox.

Z.1,430, ringed at Eton, Bucks, as a bird of the year, by Mr. A. Mayall, on August 27th, 1923. Reported at Petworth, Sussex, on June 30th, 1925, by Mr. S. C. Walker.

56,112, ringed at Cheadle, Staffs, as an adult, by Mr. J. R. B. Masefield, on March 4th, 1924. Reported where ringed, on May 21st, 1925, by the ringer.

54,440, ringed at Bluntisham, St. Ives, Hunts, as a nestling, by the Rev. E. Peake, on May 26th, 1924. Reported where ringed on April 3rd, 1925, by the ringer. Again released.

54,431, ringed as 54,440. Reported near where ringed, on June 5th, 1925, by the ringer.

GREENFINCH (*Chloris c. chloris*).—C.7,557, ringed at Torrance, near Glasgow, Stirlingshire, as a nestling, by Mr. J.

Bartholomew, on May 26th, 1925. Reported at Burnbank, Lanarkshire, on September 30th, 1925, by Mr. G. Paton per *Cage Birds*. Again released.

A.9,356, ringed near Gt. Budworth, Cheshire, as an adult, by Mr. A. W. Boyd, on February 28th, 1924. Reported where ringed in March, 1924, and February, 1925, by the ringer. Re-ringed B.9,064.

B.3,697, ringed as A.9,356, on January 10th, 1925. Reported where ringed, on July 5th, 1925, by the ringer. Again released.

LINNET (*Carduelis c. cannabina*).—C.1,044, ringed at Pyrford, Surrey, as a nestling, by Mrs. L. E. Taylor, on July 20th, 1924. Reported at Dover, Kent, late in April, 1925, by Mr. T. L. Britt.

CHAFFINCH (*Fringilla c. cælebs*).—A.2,004, ringed at Gt. Budworth, Cheshire, as an adult, by Mr. A. W. Boyd, on February 1st, 1923. Reported where ringed on February 13th, 1923, and August 15th, 1924, by the ringer. Again released.

A.2,033, ringed as A.2,004, on March 1st, 1923. Reported where ringed, twice in March, 1923, and on March 8th, 1925, by the ringer. Again released.

A.2,043, ringed as A.2,004, on March 8th, 1923. Reported where ringed on March 24th and December 4th, 1923, January 28th, 1924, and February 9th, 1925, by the ringer. Again released.

B.3,690, ringed as A.2,004, on November 29th, 1924. Reported where ringed five times in March, 1925, by the ringer. Again released.

YELLOW BUNTING (*Emberiza c. citrinella*).—A.2,008, ringed near Gt. Budworth, Cheshire, as an adult, by Mr. A. W. Boyd, on February 8th, 1923. Reported where ringed on February 26th, 1923, and February 9th, 1924, by the ringer, and near where ringed on April 17th, 1925, by Mr. J. Moore, per the ringer.

A.2,026, ringed as A.2,008, on February 26th, 1923. Reported where ringed, on February 27th, and four times in March, 1923, and on March 6th, 1924. Again released.

A.2,036, ringed as A.2,008, on March 2nd, 1923. Reported where ringed, on February 25th, 1925, by the ringer. Again released.

A.4,368, ringed as A.2,008, on May 29th, 1923. Reported where ringed, on January 6th and July 4th, 1925, by the ringer. Again released.

A.9,299, ringed as A.2,008, on February 1st, 1924. Reported where ringed twice in February, 1924, and on July 4th, 1925, by the ringer. Again released.

B.9,087, ringed as A.2,008, on February 24th, 1925. Reported where ringed on March 5th and July 9th, 1925, by the ringer. Again released.

B.9,121, ringed as A.2,008, on February 28th, 1925. Reported where ringed, on July 8th, 1925, by the ringer. Again released.

B.9,175, ringed as A.2,008, on March 10th, 1925. Reported where ringed, on July 5th, 1925, by the ringer. Again released.

B.9,183, ringed as A.2,008, on March 11th, 1925. Reported where ringed, on July 16th, 1925, by the ringer. Again released.

MISTLE-THRUSH (*Turdus v. viscivorus*).—56,754, ringed at Theale, near Reading, Berks, as a nestling, by Dr. N. H. Joy, on May 2nd, 1924. Reported where ringed, on June 18th, 1925, by the ringer.

SONG-THRUSH (*Turdus ph. clarkei*).—7,171, ringed at Torrance, near Glasgow, Stirlingshire, as a young bird, by Mr. J. Bartholomew, on June 13th, 1922. Reported at Drumchapel, near Glasgow, Stirlingshire, early in May, 1925, by Mr. G. Watt.

55,278, ringed as 7,171, on May 8th, 1923. Reported at Cadder, near Glasgow, in May, 1925, by Mr. W. Heaney.

A.5,648, ringed as 7,171, on June 1st, 1923. Reported where ringed, early in July, 1925, by the ringer.

B.8,209, ringed as 7,171, on June 15th, 1924. Reported at Canonbie, Dumfriesshire, on July 22nd, 1925, by Mr. J. Wightman.

57,726, ringed near Gt. Badworth, Cheshire, as an adult, by Mr. A. W. Boyd, on March 2nd, 1924. Reported near where ringed, on April 17th, 1925, by Mr. J. Moore, per the ringer.

Z.8,280, ringed at Pyrford, Surrey, as a nestling, by Mrs. L. E. Taylor, on May 25th, 1924. Reported near where ringed, on May 25th, 1925, by the ringer. Found dead in nesting hole of Little Owl.

Z.1,490, ringed at Streatham, London, S.W., as a young bird, by Mr. J. F. Mitchell, on July 7th, 1924. Reported where ringed, in July, 1925, by Mrs. I. Meyer.

BLACKBIRD (*Turdus m. merula*).—56,657, ringed at Bradfield, near Reading, Berks, as a nestling, by Dr. N. H. Joy,

on May 20th, 1923. Reported at Pangbourne, Berks, on June 23rd, 1925, by Mr. H. W. Conway.

Z.1,183, ringed at Salcombe Regis, near Sidmouth, Devon, as an immature bird, by Mr. P. E. A. Morshead, on August 27th, 1923. Reported at Sidg rd, Sidmouth, on September 21st, 1925, by Mr. John Wattley.

Z.3,586, ringed at Malvern, Worcestershire, as an adult, by Mr. P. E. A. Morshead, on June 3rd, 1924. Reported where ringed, on June 4th, 1925, by the ringer. Again released.

Z.2,430, ringed at Pyrford, Surrey, as an adult, by Mr. W. P. G. Taylor, on April 4th, 1924. Reported where ringed, on May 21st, 1925, by the ringer. Again released.

Z.2,091, ringed near Gt. Budworth, Cheshire, as a nestling, by Mr. A. W. Boyd, on May 14th, 1924. Reported where ringed, on January 16th, 1925, by the ringer. Again released.

Y.5,211, ringed as Z.2,091, on May 21st, 1925. Reported where ringed, on October 4th, 1925, by Mr. R. Palmer, per the ringer.

Z.1,452, ringed at Fairburn, near Ferrybridge, Yorks, as a young bird, by Mr. W. G. Bramley, on May 29th, 1924. Reported at Haxby Moor, near York, in March, 1925, by Mr. J. Anderson.

Y.2,598, ringed at Pyrford; Surrey, as a young bird, by Mrs. L. E. Taylor, on July 10th, 1924. Reported where ringed, on April 30th, 1925, by the ringer. Again released.

Z.7,438, ringed at Newlands, Kirkmahoe, Dumfriesshire, as an adult, by Mr. W. Duncan, on August 27th, 1924. Reported where ringed, on July 27th, 1925, by the ringer.

Y.7,960, ringed on Scone Estate, Perth, as a nestling, by Lord Scone, on May 16th, 1925. Reported at Anstruther, Fifeshire, on July 1st, 1925, by Mr. J. Readdie.

75,169, ringed at Hutton Forest, near Penrith, Cumberland, by Dr. H. J. Moon, on May 5th, 1925. Reported at Kirkby Lonsdale, Westmorland, in July, 1925, by Mr. E. Johnstone.

WHEATEAR (*Enanthe æ. ænanthe*).—A.2,918, ringed at Seaford, Sussex, as a nestling (female) on May 18th, 1923. Reported half a mile away, sitting on eggs, on May 17th, 1925. Deserted nest and on June 3rd, 1925, was caught again on fresh nest two miles away (*vide antea*, Vol. XIX., p. 98).

A.5,944, ringed as A.2,918, on May 20th, 1923. Caught brooding young in next valley, a quarter of a mile away, on May 20th, 1925, by the ringer.

REDBREAST (*Erithacus r. melophilus*).—P.W.34, ringed at Streatham, London, S.W., as an adult, by Mr. F. J. Mitchell, on October 2nd, 1921. Reported where ringed on October 22nd, 1921, June 24th, 1922, September 4th (re-ringed A.8,203) and October 18th, 1923, by the ringer, and April, 1925, by Mrs. Macgregor.

B.2,593, ringed at Pyrford, Surrey, as an adult, by Mr. W. P. G. Taylor, on April 8th, 1924. Reported where ringed, on November 17th, 1924, by the ringer. Again released.

A.6,207, ringed at Helensburgh, Dumbartonshire, as a nestling, by Mr. T. Kerr, on June 23rd, 1923. Reported where ringed, late in June, 1925, by Mr. H. C. Waterston. 8,524, ringed at Hindhead, Surrey, as a nestling, by Mr. and Mrs. R. O. Blyth, on June 6th, 1923. Reported at Haselmere, Surrey, early in May, 1925.

C.4,110, ringed at Cairnsmore, Newton Stewart, Wigtownshire, as an adult, by the Duchess of Bedford, on November 18th, 1924. Reported where ringed, on September 2nd, 1925, by the ringer and Mr. H. K. Smith. Again released.

B.3,940, ringed at Malvern, Worcestershire, as an adult, by Mr. P. E. A. Morshead, on February 12th, 1925. Reported near where ringed on May 8th, 1925, by the ringer.

A.2,003, ringed near Gt. Budworth, Cheshire, as an adult, by Mr. A. W. Boyd, on January 27th, 1923. Reported where ringed, on February 14th and March 9th, 1924, by the ringer. Again released.

A.2,006, ringed as A.2,003, on February 3rd, 1923. Reported where ringed, several times in March and November, 1923, January, February and October, 1924, and February and March, 1925, by the ringer. Again released.

A.9,282, ringed as A.2,003, on November 27th, 1923. Reported where ringed, on December 2nd, 1923, and March the 2nd and 8th, 1924, by the ringer. Again released.

B.3,663, ringed as A.2,003, on August 10th, 1924. Reported where ringed several times in August, September, October and November, 1924, and on February 28th, 1925, by the ringer. Again released.

B.3,609, ringed as A.2,003, on August 16th, 1924. Reported where ringed, on October 5th, 1924, and March 8th, 1925, by the ringer. Again released.

B.3,610, ringed as A.2,003, on August 16th, 1924. Reported where ringed, on November 15th, 1924, and February 15th, 1925, by the ringer. Again released.

B.3,632, ringed as A.2,003, as a young bird of the year, on August 21st, 1924. Reported where ringed, twice September and twice October, 1924, and on October 9th, 1925, by the ringer. Again released.

HEDGE-SPARROW (*Prunella m. occidentalis*).—B.2,599, ringed at Pyrford, Surrey, as an adult, by Mr. W. P. G. Taylor, on April 11th, 1924. Reported where ringed, on February 2nd, 1925, by the ringer.

J.S.58, ringed at Rusland, Ulverston, Lancs, as a nestling, by Mr. C. F. Archibald, on May 17th, 1924. Reported where ringed on September 30th, 1925, by the ringer.

B.5,177, ringed at Torrance, near Glasgow, Stirlingshire, as a young bird, by Mr. J. Bartholomew, on May 24th, 1924. Reported where ringed, on May 10th, 1925 (some time dead), by the ringer.

A.2,001, ringed at Gt. Budworth, Cheshire, as an adult, by Mr. A. W. Boyd, on January 26th, 1923. Reported where ringed, on February 2nd and September 28th, 1923, and December 8th, 1924, by the ringer. Again released.

A.2,053, ringed as A.2,001, on March 12th, 1923. Reported twice November and once December, 1924, and January 1st, 1925, by the ringer. Again released.

A.9,229, ringed as A.2,001, on August 14th, 1923. Reported where ringed on November 24th, 1924, by the ringer. Again released.

A.9,273, ringed as A.2,001, on October 22nd, 1923. Reported where ringed on April 20th, 1925, by the ringer.

B.3,612, ringed as A.2,001, on August 17th, 1924. Reported where ringed on October 3rd, 1925, by the ringer. Again released.

SWALLOW (*Hirundo r. rustica*).—7,358, ringed at Southport, Lancs, as a nestling, by Mr. F. W. Holder, on June 20th, 1922. Reported at Aiguillon-sur-Mer (Vendée), France, on August 19th, 1925, by Mons. E. Seguin Jard.

5,943, ringed at Fovant, Wilts., as a young bird, by Dr. R. C. C. Clay, on June 21st, 1922. Reported at Chilmark, Salisbury, Wilts., on May 27th, 1925, by Mr. D. Gething.

MARTIN (*Delichon u. urbica*).—B.4,537, ringed at Tarfside, Glen Esk, Forfarshire, as a young bird, by Mr. H. G. Watson, on July 9th, 1924. Reported near where ringed (dead in an empty nest), on July 16th, 1925, by the ringer.

C.3,089, ringed as B.4,537, on July 18th, 1924. Reported near where ringed, on June 9th, 1925, by Mr. J. Crowe, per the ringer.

C.3,372, ringed at Cairncross, Glen Esk, Forfarshire, as a young bird, by Mr. H. G. Watson, on July 25th, 1924. Reported near where ringed on June 8th, 1925, by Miss H. B. Mill.

C.3,371, ringed as C.3,372. Reported where ringed, on July 17th, 1925, by the ringer. Bird found dead in a nest at same end of house where ringed.

D.3,470, ringed at Bredon, Worcestershire, as a nestling, by Mr. A. Mayall, on August 14th, 1925. Reported at Saint Vincent de Paul (Gironde), France, on September 28th, 1925, by Mons. Massé.

PEREGRINE FALCON (*Falco p. peregrinus*).—102,612, ringed at Patterdale, Westmorland, as a young bird, by Dr. H. J. Moon, on May 29th, 1923. Reported in Perthshire, in April or May, 1925.

KESTREL (*Falco t. tinnunculus*).—74,583, ringed at Binley, near Coventry, as a nestling, by Messrs. F. Dipple and T. Greaves, on June 27th, 1924. Reported at Lichfield, Staffs, on April 19th, 1925, by Mr. G. Grass.

SPARROW-HAWK (*Accipiter n. nisus*).—21,360, ringed at Craigallian, Dumbartonshire, as a young bird, by Mr. D. Macdonald, on June 26th, 1923. Reported on Aivthrey Castle Estate, Bridge of Allan, Stirlingshire, on June 27th, 1925, by Mr. D. London.

HERON (*Ardea c. cinerea*).—23,366, ringed at Flowerdale, Gairloch, Ross-shire, as a nestling, by Lord Scone, on June 25th, 1924. Reported at Achansheen, Ross-shire, on April 29th, 1925, by Mr. H. Mackay.

104,007, ringed at Floriston, Cumberland, as a nestling, by Mr. R. H. Brown, on May 9th, 1925. Reported near Ferryhill, co. Durham, on June 24th, 1925, by Mr. F. Carruthers.

MALLARD (*Anas p. platyrhyncha*).—20,504, ringed at Leswalt, Stranraer, Wigtownshire, as an adult, by Mr. M. Portal, on March 5th, 1924. Reported where ringed, on February 17th, 1925, by the ringer.

- TEAL (*Anas c. crecca*).—71,665, ringed at Netherby, Longtown, Cumberland, as an adult (hand-reared), by Mr. Wm. Bell (for Sir Richard Graham), on March 31st, 1923. Reported at Randers Fjord, east coast of Jutland, Denmark, on September 21st or 22nd, 1925, by Hofjaegermester Bruun of Stenalt, per Dr. E. Lehn Schioler.
76,205, ringed as 71,665, on March 20th, 1925. Reported at Windermere, Cumberland, on August 1st, 1925, by Mr. F. H. Cloudsdale, per Mr. A. Astley.
76,399, ringed as 71,665, on April 1st, 1925. Reported at Brugh Marsh, Solway Firth, on September 5th, 1925, by Mr. R. Graham.
76,416, ringed as 71,665, on April 1st, 1925. Reported near Lunden, Schleswig Holstein (about 5 kms. from west coast, west of Tönning), on July 3rd, 1925, by Dr. Drost.
- GANNET (*Sula bassana*).—102,675, ringed at Ailsa Craig, Ayrshire, as a young bird, by Mr. D. Macdonald, on July 11th, 1923. Reported in North Sea, about 50 miles west of The Helder, N. Holland, on April 30th, 1925, by Mr. A. L. Plas.
102,735, ringed as 102,675, on July 15th, 1923. Reported at Blackwaterfoot, Isle of Arran, in January, 1925, by Mr. J. Currie.
103,839, ringed as 102,675, on July 28th, 1924. Reported at Great Yarmouth, Norfolk, on September 3rd, 1925, by Mr. W. H. Balls.
103,836, ringed as 102,675, on July 28th, 1924. Reported at Ballycastle, co. Antrim, Ireland, on September 7th, 1924, by Capt. G. Robinson.
- WOOD-PIGEON (*Columba p. palumbus*).—71,475, ringed at Torrance, near Glasgow, Stirlingshire, as a young bird, by Mr. J. Bartholomew, on June 15th, 1922. Reported where ringed, on August 28th, 1925, by the ringer.
74,022, ringed as 71,475, on July 24th, 1923. Reported where ringed, on October 10th, 1925, by the ringer.
74,027, ringed as 71,475, on May 10th, 1924. Reported near where ringed, in May, 1925, by Mr. D. Dow.
75,644, ringed at Barton, Cambs., as a young bird, by Mr. G. W. Thompson, on August 26th, 1924. Reported near Clare, Suffolk, in April, 1925, by Mr. J. Goodchild.
- TURTLE-DOVE (*Streptopelia t. turtur*).—72,945, ringed near Gt. Budworth, Cheshire, as an adult or bird of the year, by Mr. A. W. Boyd, on August 19th, 1924. Reported within fifteen yards of where ringed, on July 8th, 1925,

by the ringer. Again released. The bird was presumably nesting a few hundred yards away.

OYSTER-CATCHER (*Hæmatopus o. ostralegus*).—24,716, ringed at Collmeallie, Glen Esk, Forfarshire, as a young bird, by Mr. H. G. Watson, on July 2nd, 1925. Reported at Dalgety Bay, Fifeshire, on August 29th, 1925, by Mr. R. Gillespie.

LAPWING (*Vanellus vanellus*).—20,347, ringed at Ullswater, Westmorland, as a young bird, by Dr. H. J. Moon, on May, 17th, 1924. Reported at Clifton, near Penrith, Cumberland, in April, 1925, by Mr. H. Robinson.
58,910, ringed at Torrance, near Glasgow, Stirlingshire, as a young bird, by Mr. R. Dingwall (for Mr. J. Bartholomew), on June 22nd, 1923. Reported near Bearsden, Glasgow, on September 2nd, 1925, by Mr. H. A. Macdonald.

SANDPIPER (*Tringa hypoleucos*).—Z.1,049, ringed near Loch Ardnahoe, Isle of Islay, as a young bird, by Mr. T. Kerr, on June 16th, 1923. Reported at Danzé, near Vendôme (Loir et Cher), France, late in April, 1925, by Mons. M. Poulet.

CURLEW (*Numenius a. arquata*).—22,331, ringed at Ullswater, Westmorland, as a young bird, by Dr. H. J. Moon, in May, 1924. Reported near Dacre, Cumberland, on April 28th, 1925, by Master R. Coates, per the ringer.
71,327, ringed at Rusland, Ulverston, Lancs, as a nestling, by Mr. C. F. Archibald, on May 17th, 1925. Reported at Walney Island, Lancs, in September, 1925, by Mr. G. Neave.

25,412, ringed at Aberfoyle, Perthshire, as a young bird, by Mr. J. Bartholomew, on June 11th, 1925. Reported 2 miles from Dumbarton Castle (east), on the Clyde, on August 1st, 1925, by Mr. Wm. Downer.

WOODCOCK (*Scolopax r. rusticola*).—Z.6,102, ringed on Buchanan Castle Estate, Glasgow, Stirlingshire, as a young bird, by Mr. R. A. Stewart, on May 16th, 1924. Reported near where ringed, in November, 1924, by Mr. G. A. Mitchell.

SANDWICH TERN (*Sterna s. sandvicensis*).—96,017, ringed at Farne Islands, Northumberland, as a nestling, by Miss N. H. Greg, on July 8th, 1919. Reported at mouth of Berg River, 80 miles north of Cape Town, South Africa, in August, 1925, by Mr. E. Leonard Gill.

LESSER BLACK-BACKED GULL (*Larus f. affinis*).—37,815, ringed at Foulshaw, Westmorland, as a young bird, by Mr. H. W. Robinson, on July 12th, 1920. Reported near Silverdale Station, N. Lancs, on May 8th, 1925, by Mr. Fitzjames, per the ringer.

37,808, ringed as 37,815. Reported at Aldingham, Morcambe Bay, Lancs, early in June, 1925, by Mr. W. J. Kerry.

39,860, ringed as 37,815, on July 12th, 1922. Reported at Garston, Lancs, on July 31st, 1925, by Mr. T. Tushingham.

21,905, ringed at Annet, Isles of Scilly, Cornwall, as a young bird, by Mr. H. W. Robinson, on June 24th, 1924. Reported at Puerto de Santa Maria, near Jerez de la Frontera, Spain, early in March, 1925, by Capt. J. de Torres.

24,512, ringed at Gugh, Isles of Scilly, as a young bird, by Mr. H. W. Robinson, on July 8th, 1924. Reported at Aiguillon-sur-Mer (Vendée), France, on May 9th, 1925, by Mons. E. Seguin Jard.

22,672, ringed at Gugh, Isles of Scilly, as a nestling, by Mr. A. W. Boyd, on July 1st, 1924. Reported at St. Brevin, mouth of Loire, France, on July 20th, 1925, by Mons. A. Moliard.

GUILLEMOT (*Uria a. albionis*).—22,962, ringed at Ailsa Craig, Ayrshire, as a young bird, by Mr. D. Macdonald, on July 15th, 1923. Reported at Beer, Devon, on May 9th, 1925, by Mr. W. H. Lang.

25,194, ringed as 22,962, on July 27th, 1924. Reported on Rothesay beach, Bute, N.B., in May, 1925, by Mr. G. R. Metrustry.

MARKED ABROAD AND RECOVERED IN ENGLAND.

LAPWING (*Vanellus vanellus*).—Museum, Göteborg, Sweden, 2,302C, ringed as a young bird, on Öland in the Baltic, in June, 1924. Reported at Covenham, near Louth, Lincs, in January, 1925, by Mr. C. S. Carter. (See *Naturalist*, 1925, p. 119.)

Correction.—BLACK-HEADED GULL (*Larus r. ridibundus*).—Estonia, Tartu, Orn. 199. Reported Vol. XIX., p. 19, as *Common Gull*, should have been Black-headed Gull, as was proved by the foot of the bird obtained and kindly forwarded by Mr. A. W. Boyd.

NOTES

A LARGE RAVEN ROOST.

WHILST on a visit to the Westmorland Pennines on June 28th, 1925, accompanied by Mr. E. Blezard, we traversed a dale which terminated in a long series of limestone crags. From these we disturbed three Ravens (*Corvus corax*), and an examination of the place disclosed a large amount of droppings and loose feathers scattered the whole length of the rocks, unmistakably the product of this species. This evidence, coupled with the secluded nature of the locality, suggested to us an habitual roosting haunt of these birds, and determined us to again visit these crags on some future occasion.

This we were able to do on September 28th, 1925. When we reached the vicinity of the crags in the late afternoon, approaching them from an adjoining fell top, we disturbed in the first instance three Ravens, but on gaining higher ground we observed several others flying about the limestone scar and dale sides, and soon had ten under observation. Still proceeding towards the crags we noticed other Ravens to be leaving the dale head and joining this first party, until we were able to count seventeen birds.

Ravens continued to pass down the dale, singly or in pairs, until our number had reached twenty-three, and finally a party of four joined these, making a total of twenty-seven Ravens.

The flight of these twenty-seven birds when gathered together can only be described as winged confusion, birds flying in every direction, some lifting high in the air above their fellows, others almost hugging the crags and valley sides, whilst several flew low over the fell in our direction, but all seemed reluctant to leave the dale head, only gradually drifting down towards the foot of the valley as we approached at the opposite end.

Most, if not all, of the birds were calling during the forty-five minutes or so which we had them under observation.

R. GRAHAM.

[See note on this subject by the late E. B. Dunlop (*Trans. Carlisle Nat. Hist. Soc.*, VII., p. 2 (1923)).—EDS.]

MIGRATORY THRUSHES IN NORTH AYRSHIRE.

ON October 7th, 1922, I was able to record what proved to be the first example of *Turdus philomelos hebridensis* noted out of the Hebrides (Vol. XVII., pp. 165-6).

Each autumn I have taken careful notice of all Thrushes which appear to be on migration. Matters are simplified in this district, which is from 500 feet to 1,000 feet elevation, by the fact that the resident Thrushes (*T. ph. clarkei*) leave the uplands towards the end of September and early in October. On the appearance of frost and severe weather, the remnant entirely disappear.

This year, on September 17th, I noticed small parties of Thrushes frequenting a young fir wood, and made up my mind to obtain a specimen. It was not without difficulty that I did so, as they were very wild and flew a great distance when they once left cover.

The one which I obtained proved to be of the Continental race (*T. ph. philomelus*) ; this was kindly verified for me by Mr. Witherby. It was a female.

A single bird, which I noted had "very dark spots on breast and dark red-brown feet," was seen on October 4th, and another specimen of the Continental Thrush was shot in a small cover 800 feet above sea-level on the 9th of the same month. This bird was by itself.

The interesting point of this record is that the Redwings did not arrive here until October 4th, when I saw just two odd birds. It was not until the frost set in with northerly wind in the second week of October that the Redwings were really noticeable : on the 14th I saw quite a number. The first Fieldfare, incidentally, arrived on October 6th, another odd bird was seen on the 9th, and two or three on the 14th.

So we see that the Continental Thrushes were on migration nearly three weeks before the Redwings and the Fieldfares.

E. RICHMOND PATON.

[Cf. Early records of Fieldfare and Redwing, *antea*, pp. 131 and 152.—EDS.]

SONG-THRUSHES' NESTS CONVERTED BY BLACKBIRD AND HEDGE-SPARROW.

ON February 28th, 1925, I saw a nest of a Song-Thrush (*Turdus philomelus clarkei*) built on a wood-pile in a garden at Great Budworth, Cheshire, from which the young flew about the end of April ; on May 15th, I was told that a Blackbird (*Turdus m. merula*) was sitting there and found that it had lined the nest with hay and laid two eggs. I recorded an exactly similar case in *British Birds*, Vol. XVII., p. 85, which occurred in 1923 in the same garden—the nest in that year being in an elder three or four yards distant from the wood-pile.

Another Blackbird this year also lined and occupied a Song-Thrush's nest from which the young had flown, the young Blackbirds leaving the nest early in June. This was in a hedge about a mile and a half from that previously mentioned.

On April 22nd, 1925, in a thorn hedge at Great Budworth, I saw a nest of a Hedge-Sparrow (*Prunella modularis occidentalis*) with young, which had been built inside the cup of a Song-Thrush's nest of last year; the Hedge-Sparrow's nest which was normal and complete did not quite fill up the old nest. There were plenty of suitable sites within a few feet of it. There was no question of the nest having been tampered with.

A. W. BOYD.

SWIFT BROODING YOUNG HOUSE-SPARROWS.

I HAVE two pairs of Swifts (*Apus a. apus*) breeding in the attic of my house at Martock, Somerset. On June 15th, 1925, I went into the attic and found one Swift sitting on two eggs, while on the other side of the attic another was sitting on the nest of a House Sparrow (*Passer d. domesticus*) brooding three fully-fledged young Sparrows.

JOSEPH H. SYMES.

ROLLER IN INVERNESS-SHIRE.

A ROLLER (*Coracias garrulus*) was seen by Col. Stephenson Clarke and myself on September 15th, 1925, and almost every day afterwards for three weeks, at Fasnakyle in Glen Affric, 18 miles from Beauly, Inverness-shire. It lived on the trees and fence posts in front of the house and was relatively tame, *i.e.* would allow one to approach within 30 yards. It fed almost exclusively on the big blue-black dung beetles and it always took them in flight. It had a favourite ant-heap where it used to sit at times and there was a quantity of disgorged beetle-wings, etc., on the top of it. During the time the bird was at Fasnakyle there was one heavy storm as well as two or three sharp frosts, but it appeared to be in perfect condition. To meet with a Roller in a deer-forest was certainly an unusual experience. C. W. MACKWORTH-PRAED.

HEN-HARRIER IN MONMOUTHSHIRE.

AN immature female Hen-Harrier (*Circus cyaneus*) was shot on October 10th, 1925, on the flat land near the mouth of the River Wye.

I am not aware of any recent record of this bird in the county, but there is a well-preserved skin of an adult male

in the Newport Museum which was in a collection of birds at Tredegar Park, near Newport (the seat of Lord Tredegar, the largest landowner in the county), formed early in the last century. The bird is labelled "Mon. 1826," but the month and locality are not given.

R. C. BANKS.

GOLDENEYES AND OTHER DUCKS ON CHESHIRE MERES IN SUMMER.

THROUGHOUT the summer of 1924, Goldeneyes (*Bucephala c. clangula*) were always to be seen on Marbury Mere, near Northwich, as recorded in *British Birds*, Vol. XVIII., p. 194. Two pairs summered there in 1925.

On May 1st, there were still seven birds on the mere, five on May 5th, and on May 9th two drakes and two ducks in pairs. These four did not seem to be in any way crippled and I saw them all flying strongly. One drake was younger than the other, which was a fine old bird, appearing through a telescope to be fully mature and without any trace of brownish feathers among the green of the head, though this could certainly not be decided without handling the bird. I first noticed that the younger drake was changing into eclipse on June 9th; by July 1st both were very much less white, and by July 5th they appeared at a distance to be practically similar to the ducks except for their greater size, rather more white on the wing and a trace of the white facial spot on one of them. One of the ducks disappeared for some time during the summer and we had faint hopes that it might be nesting, but on June 25th I found it on Witton Flashes, a mile away, and all four were together on the mere on July 5th.

In October the drakes acquired their full plumage again; on the 10th I first noticed that one had resumed the white facial spot and was much whiter on the wing than it had been; by the 24th newcomers had arrived and there were ten or more on the mere—one drake at least being in full plumage.

Common Scoters (*Oidemia n. nigra*) again turned up in small numbers: on June 20th a duck or immature drake on the mere; from September 5th to 7th an adult drake on Witton Flashes, and from September 26th to October 4th from one to three on the mere, though the presence of these last and of a Pintail Duck (*Anas a. acuta*) on September 26th may possibly be accounted for by high winds.

An adult drake Scaup (*Nyroca m. marila*) spent its time between Marbury Mere and Witton Flashes from June 9th to July 5th, but it was not till October 25th that another—an immature drake or duck—appeared.

Sheld-ducks (*Tadorna tadorna*) occurred twice—one on May 5th and two on October 3rd.

Pochards (*Nyroca f. ferina*) as usual were present in July in small numbers on Marbury Mere and Rostherne Mere, but showed no signs of nesting; on July 5th we saw a drake on a pool in Delamere Forest and it is quite possible that its duck may have been sitting somewhere near by.

Wigeon (*Anas penelope*) did not arrive at Marbury Mere till the end of September; the only Wigeon seen during the summer was an adult drake on Rostherne Mere on June 13th.

A. W. BOYD.

CROSSBILLS IN BERKSHIRE.—Dr. N. H. Joy reports that he saw about a dozen *Loxia c. curvirostra* at Ascot, on October 19th, 1925.

SHORE-LARK IN KENT.—Miss A. V. Stone informs us that she watched a single *Eremophila alpestris* on October 22nd, 1925, on the shore of Pegwell Bay, at the same spot at which she saw the small flock in January, 1923 (Vol. XVI., p. 282).

WHITE WAGTAIL BREEDING WITH PIED IN SHROPSHIRE.—Miss Frances Pitt records (*Nat.*, 1925, p. 166) that a White Wagtail (*Motacilla a. alba*) paired with a Pied Wagtail (*M. a. yarrellii*) and nested on her house at Bridgnorth in 1925. Miss Pitt has kindly given us (*in litt.*) some supplementary evidence which she allows us to quote. The bird identified as a White Wagtail was the female. Miss Pitt had this bird under observation from April until the beginning of September and examined it with binoculars at a few yards' range. She had the previous year photographed and seen many White Wagtails in Norway and though she saw some females as pale on the mantle as this Shropshire bird many were darker. It was paler than any female Pied Wagtail she had ever seen and was noticeably pale even to people only casually interested in birds. We have given this evidence at length because a first year female Pied Wagtail can often very easily be confused with a female White Wagtail and so cause mistakes to be made. Miss Pitt's evidence for the degree of paleness of the mantle shows, we think, that no such mistake was made in this case.

BLACK REDSTART IN KENT.—Miss A. V. Stone writes she saw a female or immature male *Phoenicurus ochrurus gibraltariensis* at Littlestone on November 4th, 1925.

ALPINE SWIFT IN KENT.—The late Mr. Michael J. Nicoll stated (*Field*, II. VI. 25) that when he wrote he had just been

watching an Alpine Swift (*Apus melba*) flying over a field opposite his house. The note in *The Field* gives neither date nor place, but Mr. Nicoll subsequently informed us that the bird was seen during the week preceding publication at Potman's Heath, Wittersham.

LITTLE OWL BREEDING IN YORKSHIRE.—Mr. R. Fortune states (*Nat.*, 1925, p. 344) that a pair of *Athene n. vidalii* reared a brood in 1925 on the banks of the River Wharfe between Harewood and Pool.

HEN-HARRIER IN DEVON.—Mr. Stephen Renshaw records (*Field*, 23. VII. 25) that he saw a male *Circus cyaneus* on Welsford Moor, near Hartland, on July 11th, 1925.

POLYGAMY IN THE SPARROW-HAWK.—Mr. J. Hughes Onslow contributes an interesting note on this subject to the *Scott. Nat.*, 1925, p. 95. He states that on May 23rd, 1925, he visited a nesting site at Barr, Ayrshire, when two birds, apparently hens, flew from the nest. Two days later a female was trapped at a feeding place in the vicinity and a second female shot from the nest. The cock was very wary and eluded all efforts to kill him. On examination the nest proved to contain eight eggs, arranged in two rows of four, all slightly incubated. Both hens showed incubation patches. It is satisfactory to note that both hens were dissected, so that no confusion as to the sex is possible.

The Field of May 24th, 1923, p. 756, contained a note of a somewhat similar case in which a cock and two hen Sparrow-Hawks were shot from a nest in Tweeddale, which contained ten eggs, while one of the hens was about to lay another egg. (Cf. *Brit. B.*, XVII., p. 288-9).

Cases of polygamy among the Accipitres seem to fall under two heads: (a) those in which one nest is shared by the two hens, of which we have now two records in the case of *Accipiter n. nisus* and one in the case of the Kestrel (*Falco t. tinnunculus*), and (b) those in which one male is in attendance on two females with separate nests, but at no great distance apart. This has occurred both in the case of Montagu's Harrier (*Circus pygargus*) and the Hen-Harrier (*C. cyaneus*). The subject is an extremely interesting one, but the accumulation of reliable data is necessarily a very slow process.—F.C.R.J.

VARIETY OF LAPWING.—*Correction*.—Mr. J. S. Elliott informs us that the date of the Lapwing he recorded in Vol. XVIII., p. 304, which was referred to on page 156 of the present volume, was unfortunately given as February, 1924, instead of 1925.

LETTER.

THE MARSH- AND WILLOW-TITS IN CUMBERLAND.

To the Editors of BRITISH BIRDS.

SIRS,—Will you allow me to add to the editorial note appended to Mr. R. H. Brown's letter on this subject? Mr. Brown writes: "The only method of establishing the identity of these species is to have specimens examined by some competent authority." If by this he means only that it is dangerous to state positively that a bird seen in the field, even at quite close quarters, is one or the other, I am inclined to agree with him. Although I generally feel pretty confident of the identity of a silent black-headed Tit seen at close quarters, I am always glad to have the vindication of the distinctive call-notes. These, I can assure Mr. Brown, are absolutely reliable. If he has any difficulty in working out the two sets of call-notes, I would advise him to spend his next holiday in the Alps, and there study the notes and song, first of the black-headed Tit of the high pine-woods (above 1,500 metres) and then of the black-headed Tit of the low deciduous woods (below 1,000 metres). My brother and I first worked out the two sets of notes in England, but subsequently we found our conclusions fully confirmed by experience in countries where the range of the two species does not overlap. I believe a good many British ornithologists are entirely familiar with the two sets of notes.

In recent years I have spent parts of several summers in Cumberland, chiefly near the Solway (Allonby and Maryport district), and also in the Lake District. I have not yet certainly identified a Marsh-Tit, though I rather thought I heard one in the upper part of Borrowdale this summer. The Willow-Tit I have observed several times near Maryport. Comparing Cumberland with most parts of England that I know, however, I should describe both species as scarce. Perhaps I have not visited the wooded districts enough for this opinion to have much value.

H. G. ALEXANDER.

REVIEWS.

Spitsbergen Papers. Vol. I. (Oxford University Press.) 30s. net.

THIS is a collection of papers contributed to various publications as the result of the 1921 Oxford University Expedition to Spitsbergen. The articles being reprinted as they originally appeared are of different "formats," but they have been bound together serviceably and are provided with a Contents as well as a Preface in which the various expeditions, which have been made of recent years from Oxford to Spitsbergen, are briefly particularized. A second and final volume is promised later with the remaining papers of the 1921 and those of the 1922, 1923 and 1924 expeditions. The volume contains the following papers on birds:—By F. C. R. Jourdain, "The Birds of Spitsbergen and Bear Island" (*Ibis*); "The Breeding Habits of the Barnacle Goose" (*Auk*); "Birds of Spitsbergen" (*Trans. Ox. Jr. Sci. Club*); by J. S. Huxley, "Courtship Activities in the Red-throated Diver" (*Linnean Soc. Journal*); and three articles which appeared in *British Birds* (Vols. XV. and XVI.). Besides these there are two interesting papers on Ecology, which should undoubtedly be consulted by ornithologists. The volume as a whole shows what very excellent work was done in many departments of Zoology by this party of students, many of them young, and all of them keen and enterprising.

Report of the Oxford Ornithological Society on the Birds of Oxfordshire, Berkshire and Buckinghamshire; 1923-1924. Edited by the Rev. F. C. R. Jourdain and B. W. Tucker. Oxford, Holywell Press, 1925. 3s.

WE are glad to see that the Oxford Ornithological Society has been able to issue its second report within a year of its first. In these days of high printing costs, the publication of anything more than a formal report of proceedings is an anxious undertaking for most local Natural History Societies. The present one brings the status of the birds of the three counties dealt with up to date to the end of 1924, so that in future presumably single years will be able to be dealt with. We are glad to note that, unlike the former report, the observations for both years have been entered together under each species, though the records for each county have been rightly kept separate. The report contains many observations of purely local interest, which will be invaluable later on, as the status of species changes with the changing conditions of population and agriculture, etc. Of those of more general interest, that have not already been noticed in our pages, the following are the most important:—

- Goldfinch (*Carduelis c. britannica*).—Apparently scarce enough in Bucks to warrant the recording of single nests. Increase noted about Wendover.
- Cirl-Bunting (*Emberiza cirrus*).—Breeding in small numbers on the Berkshire Downs in both years.
- Wood-Lark (*Lullula a. arborea*).—A nest found on June 5th, 1924, at Boars Hill, Berks, a new locality.
- Blue-headed Wagtail (*Mo acilla f. flava*).—A male seen at Reading Sewage Farm, Berks, April 25th, 1924.
- Bearded Tit (*Panurus biarmicus*).—A pair seen near the junction of the Thames and Wytham branch (Berks), April 18th, 1924.
- Waxwing (*Bombycilla g. garrulus*).—One at Cumnor Hill, Oxon, January 26th, 1924.
- Firecrest (*Regulus ignicapillus*).—One killed by a cat at Wolvercote, Oxon, October 29th, 1923.
- Redstart (*Phœnicurus ph. phœnicurus*).—Stated to be so scarce now in Berkshire as to warrant the recording of nesting pairs.
- Hoopoe (*Upupa e. epops*).—One shot at Tadmarton, Oxon, September 28th, 1923. One seen Hungerford Park, Berks, April 19th, and a pair "in Oxfordshire," May 20th, 1924.
- Cuckoo (*Cuculus c. canorus*).—Fostered by Blackbirds (*Turdus m. merula*) in Oxford in 1923 and at Ascot, Berks, in 1924.
- Hobby (*Falco s. subbuteo*).—More numerous than usual in 1923, Berks, and one pair nested in Oxon in 1924.
- White-fronted Goose (*Anser albifrons*).—Considerable numbers in the flooded Thames Valley in January and February, 1924.
- Smew (*Mergus albellus*).—Several at Tring and on Weston Turville Reservoir, Bucks, in January and February, 1924.
- Ruff (*Philomachus pugnax*).—Two at Reading Sewage Farm, April 25th, 1924, and three, Langley Sewage Farm, Bucks, September 13th, 1924.
- Great Snipe (*Gallinago media*).—A bird probably of this species shot at Chimney, Oxon, December 6th, 1924.
- Land-Rail (*Crex crex*).—A nest with eggs was mown out near Somerton, Oxon, in 1921, and at Aston, Oxon, in 1924, while birds were heard in the county in 1922.

The London Naturalist. The Journal of the London Natural History Society for the Year 1924. London, 1925. 3s.

THE Journal of the London Natural History Society for 1924 contains several interesting articles on birds that will be useful to future workers of districts in and around the metropolis. Mr. A. Holte Macpherson has a summary of his notes on Birds in London for the years 1922, 1923 and 1924. It is written in diary form and is quite a revelation of what can be found in London by persistent observation. His most interesting records are perhaps those of the nesting of the Tufted Duck on the Serpentine in 1924 and of the Great Spotted Woodpecker in the grounds of Holland House in 1922 and in those of Chiswick House in 1923. Mr. R. W. Pethen has compiled a useful list of seventy-three species seen on or about the Walthamstow Reservoirs, giving details of the occurrences of the less common species. Most or all of these have already been recorded in our pages. The Report of the Ornithological Section (pp. 37-39) consists of a long list of miscellaneous observations, mostly records of passage migrants and winter visitors.

Bird-Song: A Manual for Field-Naturalists on the Songs and Notes of some British Birds. By Stanley Morris. London (H. F. & G. Witherby). 1925. 6s. net.

THE title of this book leads one to expect something rather more than it contains. Perhaps it would have been better to give it a less ambitious title, such as "Notes on Bird-Song in Sussex." The author has evidently kept careful records of his observations of the songs and notes of birds in the Lewes and Chichester districts, and this book is the result. Little has been written, even in general text-books on British birds, on the subject of bird-song, and so the author is something of a pioneer. Nevertheless, he does not seem to be aware of what has been written in recent times; the writings of Mr. Eliot Howard, Professor Garstang, Mr. J. P. Burkitt, and Kirkman's *British Bird Book* seem to be unknown to him, and there can be little doubt that, if he had read them, his own observations might have been turned to better account, and several errors might have been averted.

The book as a whole shows very little recognition of the individual variation of habit among birds. Song-periods are far more liable to individual variation, and to the influence of such factors as weather (frost, wind and drought) and nesting activities, than one would suppose from reading Mr. Morris's book. In the useful table at the end of the book it might have been better to give dotted lines for some of the intermittent and subdued song of early autumn. I must also take exception to Mr. Morris's description of the subdued song often heard in September and October from many species as "rehearsed" song; he gives little evidence for his idea that it is commonly produced by young birds, and my own observations tend to the opposite view. I think in a good many cases he would have done better to begin his song-periods from, say, September or October, rather than from January. Several common species are in full song by the end of November, and later interruptions are apparently due only to the weather. One would have liked a good deal more of such illustrative incidents as the number of successive "cuckooings" of a Cuckoo, and the duration of certain Larks' songs; but occasionally, as in the cases of the Woodlark and Blackbird, scanty observation is made the basis for overbold generalizations. The Flycatcher, Hawfinch, Tree-Creeper and Lesser Redpoll are much more frequent and regular songsters than

Mr. Morris seems to recognize. The first song described under Marsh-Tit appears to be the Willow-Tit's song. The present reviewer is not convinced that the attempt to reduce bird-notes to syllabic form is practically useful. It is, I believe, generally true that a teacher must try to lead a pupil from the known to the unknown. "A little bit of bread and no cheese" is fairly suggestive, but "che-che-che-chip" is hardly suggestive at all. Finally, I do not find Mr. Morris's discussion of the significance of song at all convincing.

This book cannot be recommended as a wholly reliable guide even in the somewhat limited field attempted, but it should be valuable for comparison to any who are investigating the subject for themselves.

One or two points may be noted that are outside the general purpose of the book; Mr. Morris has noted three distinct types of Meadow-Pipit in spring in the Lewes marshes, but I would suggest that the third type is really the Water-Pipit (*A. s. spinoletta*). He also gives two occurrences of *A. s. littoralis* near Lewes (March, 1899, and March, 1905), and a record of a Common Sandpiper wintering near Lewes (1903-4).
H.G.A.

The Pocket Book of British Birds. By Richard Kearnton and Howard Bentham. (Cassell.) Illustrated. $6\frac{1}{2} \times 4$ inches. 6s. net.

THIS is a useful little work giving a good deal of essential information regarding most of the British species, omitting great rarities. The authors have treated the birds binomially and have not entered into the question of subspecies, which was a wise decision in a book designed for the beginner. The information given is arranged under the headings Description, Distribution, Habits, Food, Nest, Eggs, Notes. The book is illustrated with a large number of photographs, but although some of these are useful, many are too small to be of any real assistance.

Woodcuts of British Birds. By E. Fitch Daglish. With descriptions by the Artist. (Benn.) 25s. net.

THESE engravings are not likely to appeal to the bird-lover for they are neither life-like in form nor accurate in detail. Most of the birds depicted can be identified, but the ornithologist would call many of them caricatures. Since the engravings are all labelled with the name of the bird we must assume that Mr. Daglish intends them to be taken as serious portraits and not merely as artistic studies. We do not venture here to criticize them from the latter point of view and we will only say that we are perhaps too old-fashioned to be able to appreciate any artistic merit in such studies—for instance, as those of the Stonechat, Wren, Dipper or Puffin.



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# AN HISTORICAL REVIEW OF THE LAWS, ORDERS AND CUSTOMS ANCIENTLY USED FOR THE PRESERVATION OF SWANS IN ENGLAND.

BY

N. F. TICEHURST, O.B.E., M.A., F.R.C.S., ENG.

ALTHOUGH the fact that the Mute Swan (*Cygnus olor*) was formerly kept under strict regulations in England receives brief mention in most books on British birds, the laws, orders and ancient customs, as they were termed, that governed their possession and care, hedging that valued privilege around with a number of unique and curious formalities, have been but lightly dealt with at the hands of British ornithologists. Very brief and sketchy outlines of the 1524 Witham ordinances are given by Yarrell (*B.B.*, IV., pp. 330-331) and by Gurney (*Early Annals of Ornithology*, pp. 111-112), and Mr. Harting has briefly summarized a few of the clauses in the Orders of 1632, but with these exceptions, no more than two or three other writers mention them at all; yet it is to them one must turn to gain any insight into the details of one of the most interesting experiments in combined Bird Protection and Aviculture that England has produced.

Hitherto, it has been the antiquarians who have paid most attention to this subject, and eight different codes of Orders have been reproduced in their journals or in books of an antiquarian character. These, which are all referred to later on, are all out of the beaten track for ornithologists and the articles take, as I have experienced, a good deal of finding. They were all published between 1745 and 1850, so that nothing in the least comprehensive has appeared for over seventy years, and no attempt has ever been made to compare the various sets or to trace them to their origins.

While the subject is no doubt of great interest to the antiquary, it is surely not less so to the ornithologist, so that, as I have been able to collect copies of these ancient Orders from no less than seventeen different sources, it seems worth while to try and put them into chronological order and note the chief steps in their evolution. This must necessarily be the foundation of a proper understanding and study of the measures our ancestors took for the preservation of this bird.

Up to the reign of Edward IV., though the Swan had for centuries held the proud position of a royal bird, there was no statute law that regulated the ownership of them or made any provision for their preservation. In 1482 an Act was

passed that confined their possession to persons owning freehold lands and tenements of five marks annual value above all yearly charges and provided for the seizure of those belonging to persons not having such qualification. In 1494 a statute for the preservation of Pheasants, Partridges, Hawks and Swans enacted, amongst other things, that the stealing of Swans' eggs should be punishable with imprisonment for a year and a day and a fine at the King's will, half of it going to the King and half to the owner of the Swans.

Such other regulations as were observed by those who kept Swans were either of the nature of unwritten laws, or, if written, they have not come down to us. Be this as it may, there can be no doubt that many of the formalities and regulations that afterwards became codified into the orders or ordinances were slowly evolved in the distant past and had their origin as customs that gradually became habitually followed as being convenient for the avoidance of disputes. Customs sanctified by long years of usage were always held in great respect in mediæval times and we find in the later codes that full provision is made for the due observance of such ancient customs, even though only locally prevalent, where the circumstances to which they were applicable were not provided for in the ordinances themselves. Other regulations, particularly those that were specially concerned with the preservation of Swans and carried a penalty for their infringement, perhaps arose in the same way, but eventually were made authoritative by decisions given by the commissioners and justices in Courts of Swan-mote. In this way a code of regulations was gradually evolved in every district where Swans were extensively kept and, though no doubt all followed very much the same lines, there would be variations, large or small, between the codes of different districts.

The earliest, locally applicable, code of ordinances that has come down to us is the one printed by Sir Joseph Banks in *Archæologia* in 1812 (Vol. XVI., p. 153, *et seq.*) from a copy made in 1570. It was drawn up at a Court of Swan-mote held at Lincoln on May 24th, 1524, and applied to the river Witham in that county. It differs considerably from the later codes that applied to larger areas and so for the sake of comparison is worth reprinting:—

“ 1524. I. These are the Ordinances made the 24th day of May, in the 15th year of the reign of our Sovereign Lord King Henry the 8th, by the Lord Sr. C'tofer Wylluby, Sir Edward Dimock, Mr. Goderycke, Robert Barret, Pryor of Bardney, Mr. Cheston, Mr. Penyngton, and other Justices of the Peace and Commissioners,



appointed by our Sovereign Lord the King, for the confirmation and preservation of his Highness' game of Swans, and Signets of his stream of Witham, within his county of Lincoln, with all other cryckes, or syckes, or diches, that do ascend, or descend, to, or from the said stream of Witham, viz. :—from a Breges, called Boston Breges, unto the head of the said stream, with all other moats, pounds and diches, within the said County, within the compass of the said stream, and in parties of Kesteven, of whose grounds soever they be, either Lords Spiritual, or Temporal, or other of the King's subjects, of what degree soever they be of : and also for the keeping of the game of his Lords Spiritual and Temporal, and other of his subjects that have swans and signets on the same stream, or waters, and the liberties thereof, or franchises of the same ; and also for conservation of fishing, or fowling with any nets, or dogs, or for laying of any dunings, or oyes, or nets, or for setting of lime-twigs, or any other engine of the same stream, or waters, or within the liberties of the same, or for making of fish-garths, or for making of pits or pounds for steping of hemp or flax, in the same stream or waters, wherby the stream or waters may be corrupted, otherwise than, as appointed by law, or statutes of this realm.

- " 2. Imprimis it is ordained, and by our law made, in the Sessions kept at Lincoln, the day and year above said, for our Sovereign Lord the King, and by the King's Jury there sworn, according to the law of this realm, that no person or persons having swans or signets, on or upon the said streams or water, or the liberties of the same, shall appoint or set no Swannerd for to row for him, or them, without the assent of the King's Swannerd, or his Deputy, in pain thereof for every such person as doth offend, for every time, to forfeit unto the King or Deputy the sum of x l s.
- " 3. Item it is ordained, and by our law made, that if the King's Swannerd doth mislike of the said Swannerd at any time, that then it shall be lawful for the King's Swannerd for to discharge him, and put him out presently, without any warning, and the King's Swannerd for to appoint one for to row for his masters, and the same Swannerd for to have the same fees that the other should have had, so that the King's Swannerd let his master know what was the cause of the same ; and if the said Swannerd will take no discharge of the King's Swannerd but will row still, he shall have no fees for the same, for the other shall have the fees, and for every day that he doth row, after his discharge he shall pay unto the King or his Deputy the sum of 6s. 8d.
- " 4. Item it is ordained, and by our law made, that the King's Swannerd, nor the Company, shall not go a rowing for to mark no signets, before the Monday after the feast of St. John the Baptist,\* in every year, and for every signet that is marked before that day, by the King's, or any other Swannerd, forfeit unto the King, for every swan so marked, or his Deputy, before that day, 3s. 4d.
- " 5. Item it is ordained, and by our law made, that the King's Swannerd, or his Deputy, shall give warning unto the rest of the Swanners, when that he, or his Deputy, go a rowing, and what day and place they shall meet him or them, for to go a marking, or foredrawing of any other swans, or signets, at any time

\* *i.e.* June 25th to July 1st.



within the year, when the King's Swannerd will, in pain for every Swannerd which maketh his default for the same, to forfeit to the King 6s. 8d.

- "6. Item it is ordained, and by our law made that the King's Swannerd, or his Deputy, shall keep one swan book with all the marks of the swans, in the same book, and that he shall not inroll no new merke, for no person, without the owner of the merke have freehold, according to the statute, and not without the counsell of two or three of the company beside, and he shall look that the mark shall not hurt no other mark in the book, and that the King's Swannerd shall not give or sell to no person, or persons, any mark that is within his book, whether there be swans of the same mark or no, without it be the heir or next of kin, in pain for every default, the King's Swannerd to forfeit unto the King or his Deputy, xls.
- "7. Item it is ordered, and by our law made, that there shall no Swannerd keep, or carry any swan book, but the King's Swannerd or his Deputy, for every time that any Swannerd doth keep any swan book, or doth show it to any person or persons, without the King's book, in pain for every time, to forfeit unto the King, or his Deputy, xls.
- "8. Item it is ordained, and by our law made, that the King's Swannerd, or his Deputy, shall have a book of the name of every Swannerd, and his masters, and so shall inroll in the same book every swan that is marked, and of what mark, and who is the owner of the swan mark, and that no Swannerd shall row for no masters, than his named within the same book, and that no Swannerd have no more masters than three or four at most, in pain to forfeit unto the King, or his Deputy, for every master that he doth claim more than four, 3s. 4d.
- "9. Item it is ordained, and by our law made, that if the King's Swannerd, or his Company, meet with any swans that hath young, and no Swannerd for them, and the mark in the book, then the Company shall have one, and mark the rest after the sire and dam, but if their mark be not in the King's book, then all the signets shall be seized for the King, and if the Company find any flying swans, after the time of marking, it shall be seized unto the King, paying them that take them their duty, as of custom it hath been paid in any wise notwithstanding.
- "10. Item it is ordained, and by our law made, that after the King's Swannerd, and his Company, meet with any swans blounder mark, or double mark, they shall be seized for the King, until the Company have tried it; but if they have young they shall be marked for the King, and the swanners shall not depart from the swan, until it be tried who hath the right unto her, and if they cannot try who owns her, the King's Swannerd shall set the King's mark on her, and that every Swannerd shall fulfill all these articles, in pain for every default to forfeit unto the King or his Deputy xls.
- "11. Item it is ordained, and by our law made, that after the King's Swannerd and his Company begin to mark, that there shall no Swannerd depart away, or put by any swans from marking, unto the time the King's Swannerd have done, in paid for every default, to forfeit unto the King 6s. 8d.
- "12. Item it is ordained, and by our law made, that there shall no swannerd take any swans for his masters, after the time of

marking, nor before the King's Swannerd, or his Deputy, and one other Swannerd or else two or three Swanners and one or two other men that is owner of swans with them, in pain, for every swan that he takes up without the order, he or she that taketh them up to forfeit to the King or his Deputy x l s.

- " 13. Item it is ordained, and by our law made, that all Swanners shall have free power to go into all waters, ponds, moats, fenns or marshes, for to bread or feed, in what corporation or liberty soever it be, Lords spiritual or temporal, or any other of the King's subjects, without hurt or trouble, of the same swans or breaking of their nests, or stealing of their eggs, or killing them with bow, or gun, or dog, or any other engine, by day, or by night, in pain to every man, of what degree soever, for every such default to forfeit unto the King or his Deputy 5 l.
- " 14. Item it is ordained, and by our law made, that there shall no fisher, or other man that hath any ground butting on any water, or stream, where swans may breed, or of custom have bred, shall mow, shear, or cut any thackets, reed or grass, within 40 feet of the swan's nest, or within 40 feet of the stream, on pain for every such default, to forfeit unto the King or his Deputy x l s.
- " 15. Item it is ordained, and by our law made, that the King's Swannerd of the stream of Witham, shall have free power and liberty to go with two or three of the company, into any river, ponds, or moats, within the County of Lincoln, or not, for to look for swans, so that he or they give knowledge unto the King's Swannerd of the same country, or waters without let or trouble of any of the King's subjects, in any wise notwithstanding.
- " 16. Item it is ordained, and by our law made, that there shall no manner of person or persons, hawk, nor hunt, fish with dogs, or set nets, or snares, or engines, for no fish, or fowl, in the day time or shoot in hand gun, or crossbow, between the feast of Phillip and James, and the feast of Lammes,\* in pain for every such default, to forfeit unto the King or his Deputy, the thing that is set, and in money the sum of 6s. 8d.
- " 17. Item it is ordained, and by our law made, that there shall no hemp or flax be steeped in any running water, nor within 40 feet of the water, nor any other filthy thing be thrown in the running waters, wherby the waters may be corrupt, nor no man to encroach on the running water, whereby the waters may be hurt, by any kind of means, in pain of every such default, to forfeit unto the King or his Deputy x l s.
- " 18. Item it is ordained, and by our law made, that the King's Swannerd or his Deputy, shall have full power and strength, for to view and search for all such offences, at all times, as he thinks meet for the same, and for such faults as is within these presents, and made by our law, found by them or any other person, that doth complain unto them of the same, it shall be lawful for the King's Swannerd to seize, and strain for the forfeitures of the same, and keep it to the King's use; and if any person or persons do present the same offence unto the King's Swannerd, he shall have the one moiety, the King or his Deputy the other moiety.

" And also we do command all other the King's Officers, and all other person or persons that are the King's true and faithful

\* May 1st to August 1st.

subjects, for to help and aid the said King's Swannerd, for to take and strain the said forfeitures for the King's use; or his Deputy, at peril."

(The spelling of the above has no doubt for the most part been modernized.)

The variation in these local codes, especially as regards the penalties exacted for their infringement, must have been a source of considerable confusion and difficulty in cases that occurred where the jurisdiction of one area marched with that of another and so we find a few years later a beginning was made to consolidate the ordinances and make them apply to larger areas. Thus, during the reign of Edward VI. (1547-53) a set of orders was issued by proclamation (undated) of the privy council to apply to the whole district under the jurisdiction of the deputy swan-master of what may be termed the Fenland area. This was undoubtedly the largest and most important area in the whole of England where Swans were kept, and the orders were made to apply to the whole of the counties of Northamptonshire, Huntingdonshire, Cambridgeshire and Lincolnshire.

This set of orders is in the form of a broadsheet (15 $\frac{3}{4}$  by 13 inches) printed in Gothic letter and must be of very considerable rarity. The only copy that I have heard of is preserved amongst the Cecil papers (223/17a.) at Hatfield and is endorsed in Lord Burghley's writing "For the Swans." It forms the basis of all the subsequent proclamations and differs considerably from the foregoing, so that it will be necessary to give it in full. This I am enabled to do from a transcript made for me by the Hatfield Librarian by permission of the Marquis of Salisbury. What is no doubt the same proclamation has been printed in *Archæologia* (*t.c.*) by Sir Joseph Banks, but this is professedly a copy of a manuscript copy made in 1570. It contains, besides numerous slight variations in the text, nearly, if not all, evidently due to errors in copying, two additional notes (rather than clauses) based on the Acts of 22 Edward IV. and 11 Henry VII. referred to above. These are not present in the original proclamation and by their form are almost certainly additions, applicable but unauthorized.

#### PROCLAMATION OF 1547-53.

[The numbers of the clauses have been added to facilitate reference; they represent the order of the same ones in the later proclamations.]

"This is the ordinance for the conservation and keepyng of the Kynges Swanes and Sygnetes, and of his lordes spirituall and temporall, and of his comons wythin the counties of Lyncolne,

Northampton', and Huntington and Ca'brige and the liberties and fraunchyse of the same. And for the co'servacion of fish and foule wyth the assizing of al maner of nettes wythin the sayde counties and liberties of the same.

- [§10] "Fyrst It is ordeyned and statuted that every person havynge any Swannes shall begynne yerly to marke or cause to be marked the same upon the Monday next after Trinitie Sundaye, and no person afore but after as the company may, so that the maister of the kynges game of swannes or his deputies be there present : and if any person or persones take upon hym or them in markynge to the contrary, to forfeyte to the kyng x l.s.
- [§11] "Item it is ordeyned that no person nor persons being Swanherds nor other, shall go on markynge wythout the mayster of the kynges game of Swannes or his deputy be present, with vj or iiij of the company of Swanherdes upon payne to forfeyte to the kynges grace x l.s.
- [§14] "Item it is ordeyned that no person take up no sygnet nor sygnets unmarked, nor make no sale of them, but yf the kynges Swanherde or his deputy with iiij other Swanherdes next adioynynge be presente or have knowledge of the same upon payne to forfeyte to the kynges grace x l.s.
- [§15] "Item it is ordeyned that the Swanherde of the duchy of La'caster wythin the sayd counties nor wythin the lybertyes and franchises of the same, nor no other person for hym nor by hym shall make no sale nor take up no Swanes nor marke the' wythin the sayd duchy wythoute the kynges Swanherde or hys deputy be present, upon payne to forfeyt to the kynges grace x l.s. And in like wyse it is ordeined that the kynges Swanherde of the forsayde counties nor his deputie, shal not entre in to the seyd douchy to take up any Swanes or signettes nor them to marke wyth oute the Swanherd of the duchy be present, upon payne to forfeyte to the kynges grace x l.s.
- [§16] "Item it is ordeyned that if any Swannes or signets be found wythoute the sayde duchye double marked or put out of right marke, that then it shal be seased for the king and to be delivered to the master of the kyngs game of Swannes or to his deputy, and so to remayne to it be proved by iiij or vj sufficient Swanherdes, to whom the sayd Swannes or signetes belonge or appertayne, so that the knowledge of the same be hadde by the sayd Swanherddes after the sayd delyvery afore the sessions of Swannes than next to be kepte within the county, where it shall happe the sayde Swannes or signettes to be seased and delivered in fourme afore sayde. And yf so be the property of the same Swannes or signetes cannot be knowne by the saide sessions, that then the kyng to be assured of the value of the same Swannes and sygnettes.
- [§7] "Item it is ordeyned that yf any person or persons wyfully put any Swannes from their nestes, whereso ever they brede, or els take up and destroye, or beare away the egges or egge of the sayde Swannes to forfeit for every defaute and presented in the sessions of Swannes to the kynges grace xiijs and iiijd.
- [§17] "Item it is ordeyned that no man shal make sale of no whyte Swannes nor make delyvery of them wythout the master of the game or hys deputie be present with iiij or vj Swanherdes next adioynning, under pain of x l.s. wherof shal be to the fynder vjs. viijd. and the residew to the kyng.

- [§12] "Item it is ordeyned that no person or persons hunt in fene [fence] tyme or in ani haunt of Swannes wyth dogs from the feast of Ester to the sonday after Trinite sondaye, upon payne for every tyme so doing vjs. viiij d.
- [§13] "Item it is ordeyned that if any person set any snares or any maner of Ingynnes to take bittors or Swannes betwixt the feast of Ester and lam'as, he or they to forfeit for every tyme so setting ani such Ingins vjs. viiij d.
- [§18] "Item it is ordeyned that no person nor persons shal ley no net nor nettes, nor dragge with net nor nettes wythin the common strems, waters nor marisses upon the day tyme, from the feast of the Invencion of the holy crosse unto the feast of lammas\* upon payne as often as they be found in faute and prese'ted in the sessions of Swannes before the kynges Justices xx s. to forfeyte to the kynges grace.
- [§19] "Item it is ordeined that every Swa'herd, intending to kepe any Swans or signetes, that they shal kepe the' in a pen or pit wythin xx foote of the com'e streme or els wythin xx foote of the kynges high way so that the kinges subiectes passyng by, may have the syght of the sayde Swannes, upon payne of x l.s.
- [§22] "Item it is ordeyned that there shalbe no forfet of whyte Swa'nes nor grey Swa'nes nor sygnettes, but only to the kynges grace as wel wythin the fraunches and liberties as without and as often as any person sease and delyver the sayde Swa'ns to any other perso' but only to the master of the game or to the kyngs use, he to forfeit to the kynges grace vjs. viiij d.
- [§23] "Item it is ordeyned that no maner of person nor persons shal ley nor set nettes named trameles nor nettes called drayes, nor dray wyth no net from the xvj day next before the feast of saynt Marke the evangelist unto the xvj day next enouyng the same feast.† That is to wit wythin the com'e streames waters fennes and marshes in the county of Lyncolne, Northampton, Huntington and Cambrydge, nor wythin the Ile of Ely upon payne of x l.s.
- [§24] "Item it is ordeyned that no man shall take no gray Swannes nor whyte Swa'ns fleyng, but that he shal wythin iiij dayes next after the sayd takyng, delyver it or them to the master of the kynges Swannes or to hys deputy to the kynges use, and the taker to have for hys takyng viij d.
- [§25] "Item it is ordeined that no maner of person of what estate, degree, or condycyon he be havyng any game of Swa'nes of hys owne, shalbe no Swanherde nor keper of none other mens Swa'nes upon payne of x l.s.
- [§26] "Item it is ordeyned that no Swanherd, nor fisher, nor fowler shall not vexen nor trouble another swa'herd, fysher, nor fowler by waye of accion or other wyse but only afore the kynges Justyce of hys sessions of Swanes upon payne of forfeytyng to the kynges grace xiiij s. iiij d.

God save the kynge."

In Hunter's *South Yorkshire*, 1828, I., p. 157, is to be found a set of orders, which it is stated was made in the court of

\* May 3rd to August 1st.

† April 9th to May 11th.

“ swain-mote ”\* of the manor of Hatfield for the keeping and preservation of Swans on Hatfield Chase. No hint is given of the date and the spelling has been completely modernized. It consists of the first six clauses of the preceeding proclamation (§10, §11, §14, §15, §16 and §17), from which it has evidently been adapted, for in §15 where the proclamation speaks of “ the Swanherde of the duchy of Lacaster wythin the sayd counties ” the present set has “ the swanherd of the Duchy of Lancaster within the counties of York, Lincoln,” etc. Apart from this there are a few very slight differences in wording, probably due to errors in transcription, while in the same way the penalty “ x l.s.” at the end of each clause has been mis-read and put down as “ ten pounds.”

In the sixth year of the reign of Queen Elizabeth (1563-4) this proclamation was re-issued, and its scope enlarged so as to include in addition the county of Rutland; but beyond differences in spelling, and the alterations rendered necessary by the different sex of the reigning monarch, this revised edition is word for word identical with the earlier one. It was also a Gothic letter Broadsheet and was “ Imprinted at London in Powles Churchyarde by Rycharde JUGGE and John Gaywood, printers to the Queenes Maiestie. Cum privilegio Regiæ Maiestatis.”

Both this and the next proclamation have been reprinted in a thick folio volume containing “ all such Proclamations as were published during the Reigne of the late Queen Elizabeth, collected together by the industry of Humfrey Dyson, of the City of London, Publique Notary, 1618.” It is evidently of considerable rarity, as a copy from the late Marquis of Ripon’s library sold in London on June 12th, 1925, for 3,500 guineas. Copies may be seen at the British Museum (4663) and at the Bodleian (F.c. 11).

In the twenty-seventh year (1584-5), a further step towards unifying the ordinances and enlarging their scope was taken by the issue of a revised set of orders. This was again a Broadsheet Proclamation by the Privy Council and was “ Printed at London for Thomas Woodcoke at the signe of the black Beare in Paules Church yard.” It is presumably a combination of several older sets of ordinances and it applied to the whole of England. It contains all the clauses, in nearly

\* Courts of Swain-mote were Forest Courts, so if the word as used here is correct it must be presumed that in certain districts they were competent tribunals for dealing with Swan-law offences. In most parts of the country this was certainly not so, the only competent tribunal being the Courts of Swan-mote, which were totally different.

the same order as the two earlier proclamations, except §23, which, being concerned with setting of nets for fish and having no direct bearing on Swans, is omitted; but it has in addition eleven others. There is also a considerable number of variations in spelling and wording, but none which alter the sense of the original clauses except in §7, which has been remodelled and redrafted; §12 and §13 which are slightly enlarged and in §26, where the penalty has been increased from a mark to two pounds. In the final paragraph of §15 an obvious slip has been made in drafting, the Queen's swanherd having been substituted for that of the Duchy, which makes nonsense of it.

This proclamation is simply headed "The Order For Swannes," and the following are the new and altered clauses:—

- [§1] "First you shall inquire if there be any person that doth possesse any swan and hath not compounded with the Queenes maiestie for his marke. That is to say vjs. viijd. for his marke during his life. If you know any such you shall present them that all such swannes and signets may be seased for the Queene.
- [§2] "Also you shall enquire if any person doo possesse any swan or signet that may not dispend the cleere yeerely value of fiue markes of freehold (except heire apparent to y<sup>e</sup> crowne) the' you shal present him. 22 Ed. IV.
- [§3] "Also if any person or persons doo driue away any swan or swannes breeding or prouiding to breed be it upon his owne ground or any other mans ground, he or they so offending shall suffer one yeeres imprisonment and fine at the Queenes pleasure xiijs. iiijd. 11. Hen. 7.
- [§4] "Item if there be found any Weres upon the Riuers not hauing any grates before them, it is lawfull for euery owner, swan maister or Swanherde to pull up or cut down the birth net or gin of the said Were or Weres.
- [§5] "Item if any person or persons befound carying any swan hooke and the same person beeing no swanheard nor accompanied with two swanheards. Every such person shall pay to the Qucene xiijs. iiijd. that is to say iijs. iiijd. to him that will informe and the rest to the Queene.
- [§6] "Item the ancient cystume of this Realme hath and doth allow unto euery owner of such ground where any such swan shall heiry to take one land bird and for the same the Queenes Maiestie must haue of him that hath the land bird xijd.
- [§7] "Item it is ordayned that if any person or persons doo conuey away or steale away the Egge or Egges of any swan and the same duly proued by two sufficient witsesse that then euery such offender shall pay to the Queene xiijs. iiijd. for euery egge so taken out of the nest of any swan.
- [§8] "Item it is ordayned euery owner that hath any swannes shall pay iiijd. yeerely to the maister of the game for his fee and his Dinner and Supper free, on the upping day. And if the said maister of the game faile of the iiijd. then he shall distraine the game of euery such owner that so doth fail of payment.

- [§9] "Item if there be any person or persons that hath swannes that doth heire upon their seuerall waters and after commeth to the common river they shall pay a land bird to the Queene and to be obedient to all swan laws, for diuers such persons doth use it for collusion to defraud the Queene of her right.
- [§12] "Item it is ordayned that no person shall hunt any ducks or any other chase in the water or neere the haunt of Swannes in fence tyme with any dogges or spaniels from the feast of Easter to the sonday next after Trinitie sonday, upon payne for every tyme so in hunting to forfait vjs. viijd.
- [§13] "Item it is ordayned that if any person or persons do set any snares or any manner of nets, lime or engines to take bittors or Swannes from the feast of Easter to y<sup>e</sup> Sunday after Lammas, he or they to forfeit to the Queenes Maiestie for every time so setting vjs. viijd.
- [§20] "Item it is ordayned that if any person do raze out, counterfait or alter the marke of any swan to the hindryng or losse of any mans game. And any such offender, duely proued before the Queenes maiesties Commissioners of Swannes, shall suffer one whole yeeres imprisonment and pay iijli. vjs. viijd. to the Queene.
- [§21] "Item it is ordayned that the commons, that is to say Dinner or Supper shall not exceed aboue vjd. or viijd. at the most. And if any game be found on the River where such Dinner and Supper is had and the owner of the same game absent nor any for him, the maister of the game or his deputy to lay vjd. or viijd. for euery such owner and to be allowed again of euery game, whose owner is absent.
- [§27] "Item the maister of the Queenes game shall not take away any unmarked Swan coupled with any other mans Swan for breaking of the brood, and when they do heyre the one part of the Signets to the Queene, and the other to the owner of the marked Swan.
- [§29] "Item it is ordayned that if any heire be led with one Swan, the Swan and the Signets shalbe seazed for the Queene till due prooffe be had whose they are, and whose was the Swan that is away, be it Cobbe or Peen.

God saue the Queene."

[§28 and §30 do not appear until two editions later.]

Blomefield (*History of Norfolk*, 8vo, I., p. 170) states that a set of orders was printed in 1598, but of this, unless it be the above, I have not come across another trace. Mr. J. E. Harting writes (*Zoologist*, 1895, p. 372) that he possesses a manuscript copy, entitled "The Order for Swannes exemplified out of the printed Orders for Swannes the xxvjth of marche 1598," but this is presumably a copy of the 1584 proclamation.

A new and enlarged proclamation was no doubt issued during the early years of the reign of James I., but hitherto no specimen has come to light in a printed form. There are, however, at least three manuscript copies in existence and these I have seen. Each is bound up with a roll of Fenland swan-marks, which are themselves for the most part identical



or at any rate copies of the same original and contemporaneous in date. These are British Museum Additional MS. 6301, the Bromhead roll at Lincoln (modern copy in the Public Library) and the roll in the possession of the Rev. H. S. Marriott at Wilby, Norfolk.

The relative dates of these and of the two succeeding sets of orders are rather doubtful; Mr. Bromhead (*Archæological Journal*, 1850), ignoring the constant recurrence in his copy of the word "King," by a fallacious argument and a guess assigns it to the end of the reign of Queen Mary or the beginning of that of Elizabeth. The most probable date of the swan-rolls accompanying the Bromhead and Marriott MSS. is about 1609, that of MS. 6301 about twelve years later.

The two succeeding sets I am inclined to place a few years later still, though they do not contain quite so many clauses as do the MS. ones. I place these first because the handwritings of the Marriott MS. and Add: MS. 6301 are those of early seventeenth century scribes, the dates given in them for the commencement of upping and the termination of fence-time are the same as in all the earlier sets, the wording of §21 and §22 more closely resembles that of the 1584 proclamation, while the absurd error at the end of §15, already mentioned, is repeated. In the two sets that I place later this error is corrected, close time is extended and the upping day is progressively advanced to a later date.

The three manuscript copies differ from one another, as would be expected, in spelling and in such slight differences in wording as occur when documents are copied or taken down from dictation. Want of care in copying is conspicuous throughout the Marriott MS. and several clauses are omitted altogether. Otherwise they are identical in substance and apart from a few small alterations, due to redrafting and the necessary substitution of the male for the female gender wherever the Crown is referred to, the clauses are identical and in the same order as those in the proclamation of 1584. At the end six new clauses have been added, as follows:—  
(text from Add: MS. 6301)

[§31] "Itm that noe p'son take uppe any unmarked swannes or Cignets except he be requested thereunto by a sufficient Company in the field vppon markinge dayes, nor doe Carry them to the deputy or other p'sons except he tooke them flynge.

[§32] "Itm that noe man shall serue as deputy for aboue twoe m<sup>rs</sup> beinge Owners, And that ev'y such deputy before he shall doe any service therein, doe shewe to his M<sup>ties</sup> swanheard or his

deputye and the Companye assembled, his deputation, and doe pay yearly iijd. for y<sup>e</sup> allowance thereof. And y<sup>e</sup> noe owner be deputy for another owner.

[§33] "Itm that noe p'son in uppinge tyme shall dep'te from y<sup>e</sup> Company to marke any other broode, w<sup>thout</sup> y<sup>e</sup> lycense of y<sup>e</sup> deputy; nor put out y<sup>e</sup> olde swannes before the whole broode be marked, neither put [out] y<sup>e</sup> olde swannes before he haue pulled them in the heads.

[§34] "Itm that noe p'son shall sett any hingles snares or engines for foule from Shroue tyde to St. Lukes daye.

[§35] "Itm that noe deputye shall sell any swannes or cignets except the same be his marsters.

[§36] "Itm if any person by inheritance from their ancestors, after the death of their predecessors, by sale or exchange haue obtayned any swanne marke, and hath any game of the same, he shall pay six shillings eight pence for his alienation, and the due ffes for the enrolment thereof."

The next edition occurs as a four-page, printed, quarto tract. It must be of very great rarity and I have no knowledge of where a copy is to be found. What professes to be a verbatim copy has been printed by Hone (*Every-day Book*, II., p. 958), but the source whence it was obtained is not stated. Its dated is assigned to 1570, but the evidence for this is not given and it is manifestly absurd, as is shown by the fact that in every clause where the Crown is mentioned the word used is "King"!

In this set is first found the full descriptive title, viz. :—

"The Order for Swannes both by the Statutes, and by the Auncient Orders and Customes, used within the Realme of England."

The subject matter remains the same and the clauses are in the same order as in the previous sets up to and including §27; a new clause, §28, is then added and a second one, §30, after the final one of 1584, the six new clauses of the last set being dropped. Besides variations in spelling and wording, six clauses (§6, §8, §10, §11, §21 and §22) contain slight extensions or small explanatory additions, but the principal changes are (a) the upping day (§10) and the end of fence time (§12), hitherto the Monday and Sunday after Trinity Sunday respectively, the dates therefore varying between May 18th and June 21st and May 24th and June 26th, are advanced to less variable dates, viz. the Monday after St. Peter's day (June 30th to July 6th) and Lammas (August 1st); (b) a new offence and penalty are added at the end of §24.

The altered and new clauses are as follows :—

[§6] The concluding sentence reads: "and for the same, the Kings Maiestie must have of him that hath the Land-bird, Twelve pence, Be it vpon his owne ground, or any other."

[§8] Begins: "It is ordained, that euery owner that hath any Swans, shall pay euery yeare yearly for euery Swan-marke, foure pence," etc., etc.

[§10] "It is ordained, that euery person, hauing any Swans, shal begin yearly to mark, the Monday next after St. Peters day, and no person before; but after as conueniently may be, so that the Master of the Kings Game, or his Deputy, be present. And if any take vpon him or them, to marke any Swanne or Cignet, in other manner, to forfeit to the Kings Maiestie for euery Swan so marked fortie shillings."

[§11] Begins: "It is ordained, that no person or persons being Owners, or Deputies, or servants to them, or other," etc., etc.

[§21] Begins: "It is ordained, that the Commons (that is to say) Dinner and Supper, shall not exceed above twelve pence a man" and ends: "the Master of the Game is to pay out eight pence for him, and he is to distraine the Game of him that faileth the paiement of it."

[§22] Ends: "he is to forfeit sixe shillings eight pence; and the Swannes to be restored vnto the Master of the Game."

[§24] Ends: "the Taker to haue for his paines eight pence. And if he faile, and bring him not, he forfeits forty shillings to the King."

[§28] "Also, any man whatsoever he be, that killeth any Swanne with dogge, or Spaniels, shall forfeit to the King forty shillings, the owner of the Dogge to pay it, whether he be there or no. Also, the Maister of the Swannes, is to haue for every White Swanne and Gray vpping, a penny, and for every Cignet two pence."

[§30] "Lastly, If there be any other misdemeanour, or offence committed or done by the owner of any Game, Swan-herd, or other person whatsoever, contrary to any law, ancient custome or vsage heretofore vsed and allowed, and not before herein particularly mentioned or expressed, you shal present the same offence, that reformation may be had, and the offenders punished, according to the quantitie and qualitie of the seuerall offences."

Finis.

God Saue the King."

The next edition, not improbably coincident in date with the accession of Charles I. (1625), is described (*Trans. Arch. Soc.*, Ser. I., Vol. I., p. 173) as a black letter pamphlet, and seems to have consisted of more than four leaves. It was printed in full by Mr. George Bowyer in 1847 (*Archæologia*, XXXII., pp. 426-8) from a copy from the library at Denham Court, Bucks. The present representative of the family knows nothing of it, and its whereabouts I have been unable to trace, nor have I heard of another example; but a manuscript copy, in a contemporary hand on two vellum membranes, is to be found in British Museum Additional MS. 23732, differing only in spelling and a few slips from the printed one. A second, contemporary, MS. copy, word for word identical

with the printed one, is in the possession of Mrs. Thackeray at Elsing Hall, Norfolk.

This edition is with very few slight alterations in wording a reprint of the last, but the commencement of upping (§10) is further advanced to an absolutely fixed date, August 1st, and the words "as strays" in §19 are omitted, so that the clause applies to all Swans seized by the royal swanherd and not to strays only.

The next set of orders was published in 1632 in the form of a small quarto pamphlet, now of considerable rarity. It consists of eight pages with the following title:—

"The/Orders/LaWes and/Ancient CVS/Tomes of Swanns./  
caused to be printed by John Witherings/Esquire,  
Master and Governour of the Royall Game of Swanns/  
and Signets, throughout England/London. Printed by  
August Mathewes 1632."

Of this there is a copy in the British Museum (c. 31, e. 26), a second is in the possession of Mr. J. E. Harting (*Zoologist*, 1895, p. 372) and the late Mr. Stephen Tucker, Somerset Herald, owned a third (*vide* Harting, *loc. cit.*). Yarrell once had a copy (*B.B.* IV., p. 334), but this may be the same as Mr. Harting's, while another, or a manuscript copy, is bound up with a roll of Fenland swan-marks, that was in 1863 the property of the late A. H. Swatman of King's Lynn (Stevenson, *B. of Norfolk*, III., p. 110), but the present whereabouts of this I have not been so successful in finding.

Hitherto, the codes of ordinances had been based to a large extent on the earlier Fenland ones, but the present one was derived mainly, if not entirely, from a manuscript set of Thames orders that was in force prior to 1584. This is plain from the following introduction with which it begins: "The Lawes Orders & custcmes for Swans, taken forth of a booke which the Lord of Buckhurst delivered to Edward Clarke of Lincolnes Inne Esquier, to peruse, An. Eliz. 26. On the backside of which booke. It was thus entituled Taken out of an ancient booke remaining with Master Hambden, sometimes Maister of the Swannes." Lord Buckhurst was Master of the Swans at the end of the sixteenth century and Edward Clarke was his deputy for the Thames.

In this set the penal clauses differ in the main but little from those already detailed, though some are broken up and re-arranged and the order is entirely different. Then clauses, for the most part directional in character, are new, while six (§10, §15, §17, §19, §25 and §26) of those in the preceding issues do not appear. The differences are so

numerous that it becomes necessary to give the whole code, except in one or two places, where the clauses are almost identical, adding such references to the preceding sets as seem expedient.

- (1) [Identical with §2, though differently worded.]
- (2) [Identical with §1, though differently worded.]
- (3) "But if any person hauing no Marke allowed him haue one or more Swannes giuen him, or haue any Land bird signe marked, he may keepe them in the common Riuer till the next Vpping time (without fine) paying the Commons and other charges for the Vpping.

[The next three clauses are an elaboration of §22.]

- (4) "If any person hauing Swannes, either within Franchise or without be attainted, his Swannes are forfeit to the King onely, and not to any person whatsoeuer.
- (5) "Also all Swannes that are cleere of Bill, without Marke or signe marke, are the King's onely, whether they be pinioned or flying Swannes.
- (6) "Alsoall stray Swannes which no man can challenge by his Marke, those are the King's onely. And they are to be seized for the King, and marked on the legge, but are not to be caryed away the first yeare.
- (7) "In all common streams and private waters when Cignets are taken vp, the owner of the Cob must chuse the first Cignet, and the Pen the next, and so in order. But if there be three, then the owner of the Grasse where they breed, must haue the third, for the spoyle of his Grasse: and must pay the King Twelve pence for the same Land bird sauing in such places where of ancient custome they pay lesse, or more. [This is an extension of §6.]
- (8) "If an Heiry be led with one Swanne onely, the halfe of these Cignets shall be seized for the King, till proof be made whose the Swanne was that is away; but are not to be carried away that yeare. [cf. §29.]
- (9) "The Master of the Game, or his deputy shall yearely, come at the vsual dayes of marking Swannes in that streame (on pain of loosing his Fees during his absence). And he shall keepe a Roll or Standard booke, containing all the vsual marks of that streame. He shall also keepe a Register booke of the number of euery mans Swannes, and the place where they are vpt. And shall likewise bring the booke of the yeere. For which euery Gamster is to give him yearely, Foure pence. [cf. Witham Ordinances of 1524, Nos. 5, 6 and 8.]
- (10) "Also the master of the Game, or his Deputy is to haue a penny for vpping euery white Swanne and two pence for euery Cignet, and shall haue his dinner and supper and hay or grasse for his Horse discharged by the Gamsters euery Vpping day, except in such streames where by ancient custome other composition is vsed. [Embodies parts of §28 and §8.]
- (11) If any man desire the Master of the Game to enter any notes in his booke (other than the notes due to be written as afore-said) or to take any note out of his booke vnder his hand, he is to pay for the same iijjd.
- (12) If any Swanne be vnpinioned, and thereby doe or may fly, the owner of that Swanne is to pay Four pence. And if any man

take any flying Swanne or Cignet, he must bring the same to the Master of the Game or his Deputy, and take for his pains 8d. on paine of Fourtie shillings. [§24 extended and differently worded.]

- (13) [Identical with §18 in the proclamation of 1584, which is the same, with a few verbal alterations, as that of 1564.]
- (14) "If any Swanne be found double marked, imbezeled, or by unskilfulnesse put out of right marke, the Master of the Game is to chuse fiue Gamsters (such as are indifferent) to iudge who hath right to that Swanne. And hee to whom the Swanne bee adiudged shall pay Four-pence for registering the said imbezeled or wrong marke. But if those fiue, or the greater number of them doe not adiudge the said Swanne to one of the Gamsters, then the Swanne is due to the King. [A modification of §16.]
- (15) "The vsual dayes for vpping of Swannes are not to be altered without the consent of the greater number of Gamsters of that streame, and that by Proclamation made in all market Townes neare the said streame.
- (16) "No person shall go on marking without the Master of the Game, or his Deputy bee present vpon paine to forfeit Fourtie shillings. But if by sicknesse or other occasion, hee be absent at the vsual Vpping dayes, the company may goe on, so that some sworne Gamster keepe the Register booke, and receiue all the dues, and deliuer them to him at his comming. [An elaboration of §11.]
- (17) [Almost word for word identical with §20, but with the additional penalty added " and for euer be disabled to be a Gamster."]
- (18) "And to the end that at the Vpping-time no Swanne be imbezeled, it is ordained, that no man draw blood of any Swanne, till the Master of the Game, or his Deputy haue viewed the said Swanne, and declared whose the Swanne is.
- (19) "No Swanne (other than Cleerebild) is to be marked for the King on the beake, but only on the legge. For two markes on the beake are vnlawfull.
- (20) "The Master of the Game may presently sell or cãrry away Swannes that are cleerebild, imbezeled (as aforesaid) and all Swannes forfeit for want of Freehold, or by attaint of the owner.
- (21) "And yet neither the Master of the Game, nor any other Gamster may take away any Swanne which is in broode with any other mans, or which is coupled, and hath a walke, without the others consent, for breaking the broods. [§27 modified.]
- (22) "It is ordained that Commons, that is to say, dinner and supper is to be paid daily by euery Banker and Commoner, whether he be present or absent. But if he be absent the Master of the Game is to lay it out for him (as likewise all the other dues) till their next meeting or Vpping. But the said Commons shall not exceede above Twelve pence a man. And if the Company will spend more, they are to pay the overplus by the Poll. [§21 modified.]
- (23) "To the end that diet may be had at a reasonable rate and likewise lodging, the place of taking both, is to be chosen by the greater number of the Commoners.
- (24) "If any person be found carrying a Swanhooke within fourtie lugg of any streame sauing on the Vpping dayes, and not accompanied with two swan-herdes, he shall forfeit Thirteen shillings, foure pence. But vpon the Vpping dayes, every

Gamster that caryeth not a Hooke (except such Gentlemen as for pleasure goe to see their owne Game) shall forfeit eight pence a day, the one halfe to be for the master of the Game, the other halfe for the Company. [§5 modified and extended. A Lugg = 20 feet.]

- (25) "No person shall take vp any Swanne or Cignet marked or vnmarked, vnlesse it be done in the presence of two other Swan-herdes, and that by allowance of the Master of the Game, or his Deputy, for which allowance hee is to pay Four-pence vpon paine to forfeit Fourtie shillings. [§14 modified.]
- (26) "If any Swan-herdes depart before hee haue made euen with the Master of the Game, for all dues, hee is to forfeit Twelve-pence : For which, as for all dues, the Master of the Game, or his Deputy, may distreine the game : and at the next Vpping may pay himselfe by distraining and sale of the Game, rendering to the party the overplus.
- (27) [Identical with §9, with slight difference of wording.]
- (28) "If any person shall take away the egg or egges of any Swanne : Euery such offender shall be imprisoned a yeere and a day : and shall pay Thirteen shillings Four pence for every egg so taken away. Whereof halfe to the King and half to the Owner of the Swan. 11 of Henry 7.
- (29) [Identical with §3, with slight differences in wording.]
- (30) "If any Dogge shall driue any Swanne away from her nest : the owner of such Dogge shall forfeit Thirteen shillings foure pence. But if any Dogge shall kill any old Swanne : the owner of such Dogge shall forfeit to the King Fourtie shillings, whether he be there or not. [The first half of §28, extended.]
- (31) [Identical with §12, slightly differently worded.]
- (32) [Identical with §13.]
- (33) "If there be any Weares upon the Rivers not hauing grates before them, whereby the Swannes and Cignets may be defended from drowning : the owner of such Weare shall forfeit to the King thirteen shillings foure pence. [§4, modified.]
- (34) "All Fisher-men are to assist the Master of the Game or his Deputy in the execution of their office on the Vpping dayes, with their boates at the vpper end of their severall waters, vpon paine of ten shillings for every default. For which service the Master of the Game shall cause the accustomed Fees to be paid to the said Fisher-men.
- (35) [Identical with §30.]  
 "At every Swan-heards court, all Offences committed by breach of these orders, are to be enquired of.  
 "Note, that the Swan-heard for the Dutchy of Lancaster is to observe, and see observed, all these orders in his circuite, and to receive the fees belonging to the Kings Swan-heard.  
 "Note, that in all forfeitures to the King, a fourth part is due to him that gives information of the offence.  
 "Note, that none is to go as Swan-vpper, but those who are sworne, if Courts be often kept.

Finis."

It is a curious and an unaccountable fact that all these later sets of orders (*i.e.* after 1603) contain a clause providing a penalty for the stealing of eggs, etc., under the statute of

11 Henry VII. and not one of them makes any reference to the later act of 1 James I. c.27. This prescribes a modified penalty of twenty shillings an egg, or three months' imprisonment, for the same offence and expressly provides by sec. V. that no person punishable under it should be punished under an earlier act for any offence covered by both.

The last set of orders was published in 1664 and is a re-issue with only quite minor differences and modernized spelling of the previous set of 1632. It is described as a small quarto pamphlet of six pages, and was reprinted in 1745 from a copy in the Earl of Oxford's library, in the *Harleian Miscellany* (III., pp. 359-363). It is listed by Lowndes in the *Bibliographers' Manual*, but no other original copy appears to be known.

It remains to notice briefly a set of ordinances of later date, that were of local application only. It is given in Poulson's *History and Antiquities of the Seignory of Holderness*, 1840, I., p. 355, where it is described as the "Orders and Paynes of the Court of the Manor of Hempholm to be observed by Swanners." It is stated to have been made at a Swanherds' Court held by Mr. W. Bethell, the King's Swanherd, and bears the date at the end, June 7th, 1708. It is not quite clear, however, whether this is the date of the actual drawing up of the orders, or that of their confirmation by a later court, but in any case by the preceding context they cannot have been made earlier than 1679. Although the sets of orders already given applied to the whole of England, local swan-mote courts still had power to draw up and proclaim other codes, so long as they did not alter any of the clauses in the universally applicable set. This is clear from the letter that forms a preface to the 1632 and 1664 sets, wherein John D'Oyley, an ex-swan master for the Thames, writes "at a Court holden at Burford, in the County of Oxon, about fifteen years since [*i.e.* about 1616] by the said Sir Lawrence Tanfeeld [Chief Baron of the Exchequer] and others, some new Orders were made which, Sir Lawrence Tanfeeld said, were warrantable by the Commission, and lawful to be made, where and when they were fit and necessary for the Preservation of Swans; yet so, that those particular Orders may be altered, upon Occasion; but the ancient Customs, contained under the Name of Orders, may not."

It will be seen that these orders are quite different for the most part to those already detailed and illustrate how customs and the details of marking, etc., varied in different parts of the country.



“ORDERS AND PAYNES OF THE COURT OF THE MANOR OF  
HEMPHOLM TO BE OBSERVED BY SWANNERS.

“Every person claiming swans, meet the King’s swanner at Gooddale House by eight of the clock in the morning at the two general days of swanning, viz.: the Monday before Midsummer, and the Monday before Michaelmas and shall further observe such other days and places as he shall then appoint, in pain that every person so neglecting to appear either in person or some sufficient person for him, the sum of two shillings and six-pence.

“If any person shall at any time footmark any youngswans, with other footmarks than the old to whom they belong, shall forfeit six shillings and eight pence for each swan.

“No swanner shall serve more than one master, in pain of six shillings and eight pence.

“If any person shoot any swan or swans, the person so shooting shall forfeit for every swan so shot 20 shillings.

“If any person shall take up any flying swan, he shall be paid by the King’s Swanner the sum of 11d., or if he shall refuse to pay the same, the person that takes him up shall take the said swan to his own house.

“No person shall take up any swan or swans after the general days of swanning after Michaelmas, which are not beak marked, without taking two swanners to himself, to see that right be done, in pain of 20 shillings.

“Every person shall enter into the swanning book his foot-mark, as well as his beak-mark, in pain of forfeiting all such swans to the King.

“Any person in whose ground a swan shall nest, may challenge any bird, paying unto the King’s Swanner 12d.

“If any person shall pinion a brood of young swans, shall be paid by the owners thereof for every brood so pinioned six pence, but if the party refuse to pay the same, the party that pinioned the the same shall take one of the young swans to his own use.

“No person shall beak-mark any young swans before the Monday next after Michaelmas, in pain of every young swan so beak-marked, the sum of six shillings and eight pence.

“At a court held the 7th of June, 1708.

“Allowed by Marmaduke Nelson, steward of the said court.”

## OBITUARY.

## MICHAEL JOHN NICOLL.

WITH the death of Michael John Nicoll at the age of 45, on October 31st last, there passed prematurely away one of the best known of the younger school of British ornithologists. The third son of the Rev. C. A. Nicoll, he was born at Bepton Rectory, Sussex, in 1880, and spent the whole of his boyhood at St. Leonard's-on-Sea, whither his parents had moved a few years later. Being delicate as a child he was educated locally, and after leaving school passed several years on a farm at Brightling. At a very early age his innate love of natural history began to show itself, and it was during these early years that he began the study of British birds and to form a collection of skins. This was constantly added to in later years, in the intervals of other work, whenever he was at home. In the course of time this collection grew to a considerable size, all the birds being shot and skinned by himself and nearly all obtained in Sussex. When, later on, fate decreed that so much of his life should be spent abroad he disposed of it to the Dyke Road Museum at Brighton, where it could be permanently cared for and form the nucleus of a working collection for the use of students.

His early work obtained constant encouragement from Mr. Thomas Parkin, with whom he was always on terms of cordial friendship, and from the late P. L. Sclater, on whose recommendation he was elected to membership of the British Ornithologists' Union in 1902. At the instigation of the latter he put in several years of good work in the prosectorium of the Zoological Society, and it was also on Sclater's recommendation that he obtained his first opportunity of doing pioneer work outside the British Isles, being invited by the late Lord Crawford to accompany him as naturalist in his yacht "Valhalla."

In the three voyages undertaken between 1902 and 1906 72,000 miles were covered, and as a result the Natural History Museum was enriched by the addition of 732 birds, besides many other natural history specimens, all collected and prepared by Nicoll or under his direction. The birds collected and observed were duly described by him in three long papers that were published in the *Ibis* in 1904 and 1906. An account of his voyage round the world in 1902-3 formed the subject of a short paper in the *Zoologist* for 1904, while a general

account of all three voyages was published by him in 1908 under the title *Three Voyages of a Naturalist*, a most fascinating book of travel and natural history observations, that was very well received and ran to a second edition.

In 1906 Nicoll obtained an appointment under the Egyptian Government as second in charge of the Zoological Gardens at Giza, of which Capt. S. S. Flower was Director. Here, with the exception of the usual intervals of leave, he spent practically the rest of his life in a congenial occupation with abundant opportunities for the advancement of the science which he had made his life's work. In the intervals of the routine work he devoted his energies to the formation of a representative collection of the birds of Egypt, which, when he left, amounted to some 4,000 skins, arranged by him in the museum attached to the gardens. So long as it remains it will form a monument to Nicoll's industry, skill and devotion. He proposed to make it the foundation of an exhaustive work on the birds of Egypt and as a stepping stone he brought out in 1919, under the auspices of the Government Zoological Service, a small handbook, designed for the guidance of such visitors to Egypt as are interested in the birds of the country. The more scientific side of his work on Egypt's birds is embodied in his "Contributions to the Ornithology of Egypt" that appeared in the *Ibis*; in 1908 on the "Birds of Lake Menzaleh"; in 1909 on the "Birds of the Province of Giza" (3 parts), and in 1912 on the "Birds of the Wady Natron." He was also the author or joint author of several special reports in the publications of the Egyptian Zoological Service, notably the "Wild Birds of the Giza Gardens" (publication 23), as well as in the *Cairo Scientific Journal*, the *Avicultural Magazine* and numerous notes in the *Bulletin of the B.O.C.* He left much material in a forward state towards his more ambitious work on the birds of Egypt and it is to be hoped that it may be possible for this to be continued by other hands.

On the retirement of Major Flower in 1923, Nicoll succeeded to the senior post, but only a few months later he was forced to return home on sick leave and early in the present year definitely retired. On returning to England he acquired a home at Wittersham in Kent, where he could devote himself to sport, the working up of his Egyptian material, and the study of the native birds that were his first love. It is tragic to think that his life there should have been so short; but marred as it was by frequent attacks of ill-health, borne with an heroic and cheerful courage that was the admiration of all his friends, he enjoyed every hour of it, and near by he was

laid to rest, on the slope of a hill overlooking the marsh he loved so well.

Gifted with a keen eyesight and a musical ear, both of which he trained from early life and kept in constant practice, Nicoll was a quite unusually good observer and in consequence had a wonderful, and at times almost uncanny, facility for the recognition of unusual birds in the field. Possessed of a keen sense of humour, he was always a delightful companion, his keenness, knowledge and skill both as field naturalist and museum worker ensured him a high place amongst ornithologists of the day, while his kindly unselfishness, straightness of character and staunchness were the outstanding qualities that will be sorely missed by the numerous friends he has left behind him.

N. F. TICEHURST.

# NOTES

## AUTUMN MOVEMENTS OF BIRDS IN EAST SUFFOLK.

OF the autumn movements in the Southwold district, the following are perhaps worthy of record : (1) The remarkably early departure of the Swallows (*Hirundo r. rustica*) and House-Martins (*Delichon u. urbica*) ; (2) the vast influx of Blackbirds (*Turdus m. merula*) and Golden-crested Wrens (*Regulus r. [regulus ?]*) that made their appearance about the second week in October.

There has not been a single Swallow or House-Martin in this district since October 2nd, nor have any, so far as I know, been seen on pas age, though in other years both species are quite plentiful until nearly the end of the month, with stragglers even in November. Reports from Aldeburgh and Bungay are similar.

At the time of writing (November 10th) the Goldcrest, which I assume to be the Continental form, literally swarms everywhere, whilst Blackbirds (chiefly immature males) may be seen in almost incredible numbers.

Another species unusually abundant this autumn is the Jay (*Garrulus g. [glandarius ?]*). On October 14th I saw a flock of about a dozen flying over an open heath near the sea, and every covert for miles around appears to be full of them.

CHARLES E. ALFORD.

## LONG-TAILED TITMOUSE LAYING BEFORE COMPLETION OF NEST.

ON May 13th, 1925, I observed a pair of Long-tailed Titmice (*Egithalos caudatus roseus*) on Bow Hill, Sussex, both carrying feathers to line their nest. Upon examination the nest contained two eggs and only a very few feathers in one part of its interior. Upon a subsequent visit on May 17th, during the morning, there were five eggs. On June 3rd the nest was again visited and contained ten eggs. Seven of these were very much incubated but not chipping (a period of thirteen days from the last egg laid), one much incubated, this egg being partially buried in the feather lining, and two, which were entirely *below* the feather lining as completed, not at all incubated. The feathers in the lining were counted to see if the evident great haste with which the nest was built would

affect the number used adversely. They numbered 667 as compared with 1,766 and 1,643 of first-brood nests from the same district. RAYMOND CARLYON-BRITTON.

[This was evidently a second laying in a hastily constructed nest. The point of most interest seems to be that the incubation period was over 13 days from laying of last egg. In the *Practical Handbook* the period is "probably about 12 days." W. Evans records 16-17 days from last egg, but was doubtful as to the correctness of this observation. R. H. Brown records 14 and 18 days in two cases. It is now fairly obvious that 12 days is an underestimate and that 14-17 days is nearer the mark.—F.C.R.J.]

#### BLACK REDSTARTS IN SUFFOLK.

ON the morning of October 21st, 1925, I saw four immature Redstarts on a lawn adjacent to my garden near Southwold. In view of the lateness of the season, and the fact that they were suspiciously dark, I fetched my glasses and at once satisfied myself that I had before me a family of Black Redstarts (*Phœnicurus o. gibraltariensis*). In the afternoon the adult male appeared, his sooty underparts and vivid white wing-patch placing the matter beyond the realms of doubt, whilst on the following day his mate also put in an appearance. They remained here for seven days, during which period I was able, through holes bored in the wall of an adjoining shed, and of sufficient diameter to accommodate my glasses, to study at close range all the six members of this interesting family, though the two occasions on which I saw the adult female were limited to only a few moments.

CHARLES E. ALFORD.

#### BLACK REDSTART IN YORKSHIRE.

ON November 6th, 1925, I saw a fine adult male Black Redstart (*Phœnicurus ochrurus gibraltariensis*) on the moor near Breckon Howe half-way between Goathland and Sleights, at about 900 feet above sea level.

W. S. MEDLICOTT.

#### BLACK REDSTARTS IN WIGTOWNSHIRE.

Two Black Redstarts were seen by me near the lighthouse on the Mull of Galloway on November 6th, 1925. They were tame, and I was able to watch them at close quarters for as long as I wished.

M. BEDFORD.

COMMON BUZZARDS AND PEREGRINE FALCON IN  
SURREY.

ON October 3rd, 1925, I saw a Common Buzzard (*Buteo buteo*) passing over Epsom Downs. It flew away in a south-easterly direction, taking the same course as a bird of this species which I observed in the same locality on October 1st, 1922.

I may mention that Mr. E. Leonard Gill recorded a Common Buzzard seen over Epsom Downs on June 4th, 1922 (Vol. XVI., p. 220).

On October 25th, 1925, I noticed a Peregrine Falcon (*Falco p. peregrinus*) soaring over Epsom Downs. I was at first doubtful as to the identity of the bird, but fortunately it headed straight towards me so that I was able to obtain a clear view of the light cheeks and moustachial streaks.

HOWARD BENTHAM.

## STATUS OF THE GOLDEN EAGLE IN IRELAND.

IN *Brit. Birds*, Vol. IX., p. 251, Mr. C. J. Carroll gave details of the extermination of the Golden Eagle (*Aquila ch. chrysaëtus*) in Ireland, and stated that the last Donegal bird was shot in the spring of 1915 and the last Mayo bird in November of the same year. Since that time there have been rumours of the existence of these birds, but so far no definite proof of their existence has come to hand. Mr. G. A. French (*Field*, August 13th, 1925, p. 303) states that he twice saw an Eagle in May, 1925, at Glenveagh, co. Donegal, and his boatman asserted that a pair had nested in the glen two years ago. He also mentions on hearsay evidence the breeding of another pair at Glenvier in the same county two years ago, and one reported as seen in Tyrone in 1924.

Captain W. Ashley Pritt, who was stationed for some years in the west of Ireland after the war, and knows Galway and Mayo well, informed me last February that in December, 1923, a Golden Eagle sailed close overhead while he was in the Eriff valley, between Kylemore and Killeary Bay. There is an old breeding site of the Golden Eagle in the Eriff valley, about five or six miles from Leenane, and I well remember flushing an Eagle from the hillside close to the old eyrie on April 24th, 1899, though even at that date there was reason to believe that it was an unmated bird. The reported reappearance of this species in its old haunts is interesting, and it might be worth the while of one of our Irish correspondents

to investigate the matter, as it is evident that some large raptorial bird has occurred there during the last three years.

F. C. R. JOURDAIN.

#### GARGANEY IN ANGLESEY.

MR. CHARLES OLDHAM writes that he saw two, if not three, Garganeys (*Anas querquedula*) on Llyn Penrhyn, near Valley, Anglesey, on July 26th and again on the 29th, and August 2nd, 1925. The species is rare in Wales, and most of the examples recorded in my *Vertebrate Fauna N. Wales* were in Anglesey.

H. E. FORREST.

#### STATUS OF SHOVELER IN CUMBERLAND.

THE Shoveler (*Spatula clypeata*) has long been known as a breeding species along the Cumbrian shores of the Solway. In recent years it has become more numerous and extended its breeding area further inland. For several seasons past the nests of one or two pairs have been found in the vicinity of a tarn in the Solway area.

From 1922 onward I had constantly noted two pairs in breeding time frequenting Tarn Wadlyn, ten miles south of Carlisle. On May 4th, 1925, after raising a male and female from a pool of water, I flushed a second female from a nest containing three fresh eggs a short distance from the pool. On the 11th, not a fleck of down or scrap of nesting material remained to tell of its existence, and the fate of the eggs could only be guessed at.

When again at the Shoveler haunt on May 21st, a male on the pool convinced me by his manner that his mate was sitting not far away. My search ended when she scuttered off her nest and six eggs within a stone's throw of the site of the first nest.

On May 25th both birds were on the pool. The nest contained ten eggs, which were embedded in down and had been covered with a mass of loose herbage.

E. BLEZARD.

#### POCHARD AND TUFTED DUCK BREEDING IN ANGLESEY.

IN view of the paucity of data regarding the nesting of the Pochard (*Nyroca f. ferina*) and Tufted Duck (*N. fuligula*) in North Wales, the following notes are of interest. Mr. Charles Oldham tells me that he saw a female Tufted Duck with a



well-grown brood on a pool in the Cors Goch, near Llanbedr Goch, on July 25th, 1925. Also a female Pochard with two young, not full-grown but able to fly, on Llyn Maelog, on the 27th. Furthermore, he noted several Pochards with three or four Tufted Duck on Llyn Coron on the 28th, and on Llyn Dinam the following day. It is quite likely that some of these were young birds, since by that date they are often as big as their parents. I may add that most of the Anglesey pools are so overgrown with rushes, etc., that any number of water-fowl can lie hidden. They will only be seen by an observer who will watch patiently till they emerge into open water.

H. E. FORREST.

### GANNETS IN SHROPSHIRE.

ON October 25th, 1925, two large birds were seen high in the air at Weeping Cross near Shrewsbury. They appeared to be fighting, and fell to the ground near the house of Mr. Jabez Owens. He ran to the spot and captured them alive, though his hands were wounded in the struggle. The birds proved to be Gannets (*Sula bassana*) in the spotted juvenile plumage. He shut them in a pen until the 27th, and then—since he could not feed them—he released them. One flew away, and the other, which had a slightly injured wing, made off half-flying, half-running. Although the weather at the time was not rough, there had been high winds just before, and the Gannets had no doubt been driven inland by them. Unlike some of the Gulls, which regularly migrate along the Severn Valley, the Gannet does not occur in Shropshire except when storm-driven.

H. E. FORREST.

### UNUSUAL NEST OF TURTLE-DOVE.

ON June 25th, 1925, I put a Turtle-Dove (*Streptopelia t. turtur*) off its nest containing two eggs, in Sussex. This was situated in a low thorn in the midst of a clump of brambles quite close to a tall hedge-row and trees. Save for perhaps half-a-dozen small twigs this nest consisted entirely of dried grass bents, the field having been cut for hay. There was an abundance of twigs available within a few yards.

RAYMOND CARLYON-BRITTON.

[This is unusual, but the Turtle-Dove occasionally makes use of other materials than the usual fine twigs. Cf. *Zool.*, 1907, p. 326, where O. V. Aplin records one nest lined with

buttercup flower stalks gathered when green, and a second lined with "squitch" grass.—F.C.R.J.]

### SPOTTED REDSHANKS IN SURREY.

ON the evening of May 27th, 1925, Mr. Richard Kearton and I observed two Spotted Redshanks (*Tringa erythropus*) in a boggy field near Elstead. The birds flew away after we had been watching them for about a quarter of an hour, and we were unable to locate them on the two following days.

We had a close view of both birds and were able to compare them with some Common Redshanks breeding in an adjoining field, so that any doubts as to the correctness of our identification were quickly dispelled.

HOWARD BENTHAM.

SHORE-LARKS ON HOLY ISLAND.—Miss B. C. Paterson writes that on October 25th, 1925, she saw two *Eremophila alpestris* on the coast of Holy Island, Northumberland.

BLACK REDSTART IN HAMPSHIRE.—Mr. J. P. Hardiman writes that he watched a female or immature male *Phœnicurus ochrurus gibraltariensis* at Christchurch Priory on November 29th, 1925.

LITTLE OWL IN LANCASHIRE.—Mr. Thomas L. S. Dooly informs us that a Little Owl (*Athene noctua mira*) was seen by a friend of his at Formby on November 18th or 19th, 1925.

RUDDY SHELD-DUCK AND RED-CRESTED POCHARD IN MIDLOTHIAN.—With reference to the note under this heading on page 156, we regret to have quoted the date of the appearance of the Ruddy Sheld-Duck wrongly from the *Scottish Naturalist*. The date should have been October 1923 to March 1924, not 1924 and 1925. The Rev. W. Serle, who has a clear view of Duddingston Loch from his windows, informs us that there were two Ruddy Sheld-Ducks on the loch during December and January and that from the first they were tame and fed by the water's edge while people were close, so that these birds were probably escapes from captivity.

Mr. Serle also informs us that the Red-crested Pochard mentioned in the same note first appeared on October 21st, 1924, and remained on the loch until March 1925, when it left with a large flock of Common Pochards.

ALBINO SNIPE IN MERIONETH.—Mr. H. E. Forrest writes that on September 12th, 1925, a white variety of the Common Snipe (*Capella g. gallinago*) was shot by a keeper at Aberdovey. Some of the feathers were sent to Mr. Forrest, but the bird was so badly shot that it could not be preserved. With the exception of two or three dark spots the plumage was pure white.

## LETTER.

### COURTSHIP OF THE TEAL.

*To the Editors of* BRITISH BIRDS.

SIRS,—In his interesting description of "*The Courtship of the Teal*," Mr. Henry Boase (*antea*, p. 164) refers to a curious habit of this and other ducks of "plunging and splashing, darting hither and thither, diving completely at times." For some seasons past I have observed this same habit among the Mallard, Teal, and other ducks on the lake in St. James's Park, and on the Serpentine. My observations of the habit being confined to the period commencing with the moult into eclipse plumage, and ending with the assumption of winter dress, have led me to attribute it to some irritation caused by the moult. Certainly the frantic turns and twists accompanied by much splashing with wings, and followed generally by a lightning quick plunge under water, submergence often lasting five seconds or longer, are highly suggestive of some physiological state of irritability.

Of course, if the habit has been observed in the period following the assumption of full winter dress, and before the moult begins at the end of June, or thereabouts, which would be of interest to learn, the cause must be other than the moult.

H. A. F. MAGRATH.

[The same phenomenon can be observed with domestic Ducks, and as the motions are often executed simultaneously by several individuals, it seems to have some social significance. Last noted about three weeks ago, *i.e.* about the end of November, 1925.—F.C.R.J.]



# REVIEWS



*In Praise of Birds.* By Charles E. Raven, D.D., Canon of Liverpool.  
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In this book Canon Raven has for the most part given us his personal experiences as a bird-watcher and photographer during the past seven or eight years. As a busy man, first as a "don" at Cambridge and later as a parish priest, his opportunities for bird study have, as is the case with many of us, been very limited, but being blest with an intense love of the objects of his studies he has made the most of his limited opportunities. Although there is nothing very startling or new in his observations, he has produced an eminently readable book that cannot fail to bring back vividly memories of many delightful days to those who know and appreciate the beauties of Fenland and Breckland and their birds. More than half the book is taken up with an account of a visit to Holland in 1924, where the author had the good fortune to make the intimate acquaintance of such fascinating species as the Avocet, Ruff, Black-tailed Godwit, Black Tern and Short-eared Owl. The photographs of these are amongst the best of those with which the book is profusely illustrated. As a whole the pictures are somewhat unequal in merit, but the majority are quite successful studies. They are reproduced in a very pleasing soft brown tone, though they lose somewhat in detail from the process employed and the dull, rather rough-surfaced, paper on which they are printed. As a book for a winter's evening this volume can be heartily recommended, while the beginner in bird photography cannot fail to derive some help from its perusal.

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## SOME NOTES ON THE GOLDEN EAGLE.

BY

DUNCAN MACDONALD.

THE following notes on the Golden Eagle (*Aquila chrysaetus*) are based on observations made in the western counties of Scotland. At two of the eyries "hides" were erected at distances of 15 and 7 feet respectively. It was from these that some of the photographs shown were obtained. In the examination of a number of eyries two features recurred so often that mention of them may be of interest :—

- (i) The constant use of Eagle-grass (*Luzula sylvatica*) as a lining for that part of the nest containing the eggs.
- (ii.) The altitude at which the eyries were found was never more than 2,000 feet above sea level, and rarely below 1,800 feet. Isolated eyries may be at any height (*e.g.* eyrie M), but 1,900 feet seems to be the typical altitude.

All the nests that came under my observation were built on cliffs and fall into two fairly distinct types :—

*Type A.*—The eyrie is protected by an overhang of rock to a greater or less degree and screened on one or both sides by projecting ledges.

*Type B.*—No shelter is afforded by overhanging rock in any way. The nest is built between the rock face and some bush or tree growing from a crack or fissure in the cliff. It retains its position solely on account of the support afforded by the bush or tree.

A reference to the table will show that the eyries are to be found facing in all directions. The position of the eyrie is not dictated by the prevailing or coldest winds, but solely by its immediate surroundings.

TABLE.

| Eyrie. |     | Type. | Altitude.<br>Feet. | Height above     |            |
|--------|-----|-------|--------------------|------------------|------------|
|        |     |       |                    | Ground.<br>Feet. | Facing.    |
| C      | ... | A     | 1,900              | 15               | West       |
| D      | ... | A     | 2,000              | 40               | East       |
| E      | ... | A     | 1,900              | 50               | East       |
| F      | ... | A     | 1,800              | 40               | North-east |
| G      | ... | A     | 2,000              | 20               | East       |
| H      | ... | A     | 2,000              | 90               | East       |
| I      | ... | A     | 1,800              | 30               | North      |
| J      | ... | A     | 1,800              | 12               | North-east |
| K      | ... | B     | 1,800              | 70               | South-east |
| L      | ... | B     | 1,900              | 40               | East       |
| M      | ... | B     | 900                | 30               | South      |

## FOOD.

Food consists chiefly of mountain hares, rabbits and Grouse. At eyrie H a Curlew was found—the capture of this bird would have been a sight worth seeing! At eyrie J a small lamb about a week old was discovered. This was provided for the hen Eagle, who was sitting hard, the eggs being due to hatch within a week. There had been much snow and hard weather. This is the only lamb I have found at an eyrie.

I have examined a number of pellets found in late spring and early autumn. In one were two complete Grouse claws and some rabbit bones. The rest consisted chiefly of fragments of mountain hare and sheep wool. There were a number of dead sheep in the locality where the pellets were found. It is a treacherous glen from the sheep-farmer's point of view, and a number of animals are lost every year. Eagles will often take a semi-carrion diet, as is shown by the ease with which they can be trapped. No doubt this particular bird had been feeding on some of the carcasses.

## BEHAVIOUR AT THE NEST.

The cock bird takes his share of brooding the Eaglets when they are very young, from the day of hatching until they are about ten days old. He probably assists in incubating the eggs, though I have not had an opportunity of seeing this. The Eaglets up to the age of a fortnight seem to be fed chiefly on Grouse. At one eyrie from a distance of seven feet I watched the cock bird feed an Eaglet a few days old. He did this in a very delicate manner, tearing off strips of flesh from a Grouse and putting them very carefully into the beak of the baby bird. At this eyrie the male bird remained beside his sitting mate the whole night. I entered my "hide" during the evening and, having a very good one of imitation rock, was able to watch the birds from a distance of a few feet without in any way arousing their suspicions. This was at eyrie J. Feeding started early, about 6 a.m., and continued till mid-day with increasing intervals. From noon till 2.30 p.m. no food was given to the Eaglet. At that hour I left the "hide" and disturbed both birds. I might add that on a subsequent visit a few days later I found the Eaglet missing, my hide pushed in, shot marks on that part of the rock beside which the Eagle sat when brooding, and some breast-feathers and down adhering to the rock among the shot marks. This shattered all my hopes of filming the birds. None of the local shepherds or keepers was implicated, and so far I have not discovered the miscreant.

At eyrie H I watched the Eaglet from the age of a month till he made his first flight. I was handicapped from the photographer's point of view by a long spell of bad weather.

The "hide" I used on this occasion was rather conspicuous on account of its position. It was supported by iron pins driven into cracks in the rock face. The ledge inside it sloped at such an angle that it was impossible to sit securely on it



GOLDEN EAGLET (Eyrie H).

(Photographed immediately after "ringing" by Duncan Macdonald.)

and I had to be supported by a rope fastened to a crowbar at the cliff top. There was a drop of 100 feet below me. I spent several nights in it. It often rained, and one storm nearly blew the hide away. I usually entered it about midnight, leaving a shepherd's cottage where I spent the week-ends at 9.30 p.m. As already stated, the "hide" was conspicuous and was always regarded by the Eagle with

suspicion, and for this reason her behaviour may have been slightly abnormal. In any case she was more wary and timid than the average bird. I tried entering the "hide" during the day, taking every precaution, but she never turned up. The Eaglet at this time was 5-6 weeks old and could go without attention for hours at a time. For this reason I was compelled to enter during the night. The hen bird was



GOLDEN EAGLET. (Type A cyrie).  
(*Photographed by Duncan Macdonald.*)

always at the nest when I climbed down to my shelter, which was usually between midnight and 2 a.m., except on the last occasion, when the Eaglet was almost fully grown. Owing to a bulge in the rock face I could enter the "hide" without being seen by the occupants of the nest. During one very stormy night, when the "hide" was nearly blown away, the hen bird sheltered the Eaglet from the worst gusts by standing beside him in a half-crouching attitude. On all other

occasions she remained at the outer edge of the nest. Feeding started early, about 5 a.m. I need hardly remark that owing to the intense cold, wet, and the vile position I was in, sleep was out of the question, consequently I could devote all my time to observation. The Eaglet awoke about 4.30



HEN GOLDEN EAGLE AT NEST. (Eyre J).

(*Photographed by Duncan Macdonald.*)

and soon demanded a meal, giving out shrill yelps. The female bird would leave the nest and return in about twenty minutes' time bearing the hind-quarters of a mountain hare in her talons. There was a larder not far off, supplied, I think, by the cock bird, whom I never saw at the eyrie and only on

two occasions at a considerable distance. (The larder hardly deserved the name, whenever I examined it. I found only strips of fur and bones in it.) At times the partially dismembered body of a Grouse would be brought, but mountain hares formed the chief diet. As the day advanced the hen bird would stay away for longer intervals and I never saw her bring food after mid-day. I usually left at 3.30 p.m., so cannot say if feeding was renewed in the evening. It was during the latter part of the Eaglet's sojourn in the nest that these observations were made, and he could to a certain extent feed himself. Taking him all round he was a bit of a buffoon, and unless very hungry preferred to play about with bits of heather, old Grouse bones, and other grisly remains in the nest. He would often toss them over the side of the eyrie and watch them fall, putting himself into the most ludicrous attitudes.

He spent most of his time removing the last traces of down from amongst his feathers, gazing across the corrie and watching for the return of the mother bird, whose approach he always heralded with shrill yelps. He generally dozed after a meal.

A Wren had a nest some 60 feet below the eyrie and the Eaglet would listen attentively to its trilling notes. The hen Eagle seemed to resent the Wren's song. I climbed down to the nest on several occasions and took pictures of the Eaglet at close quarters. I also ringed him with a Witherby No. 5 ring, the second Eaglet I have marked. The first was at eyrie G. By slipping my coat over his head I prevented him from making use of his beak, which was fortunate, as earlier that morning I had seen him bite the leg of a mountain hare, bones and all, in two pieces.

I had the pleasure of seeing him make what I am pretty sure was his first flight. There was a very strong wind blowing at the time towards the cliff in which the eyrie was situated. On catching sight of me he yelped shrilly. I think the ringing incident of the previous week still rankled in his mind. Suddenly he cast himself off the eyrie and launched out over the chasm beneath. He flapped in a very clumsy manner, being buffeted hither and thither by the force of the wind, until I feared that he would be driven back and dashed against the cliff.

However, he soon gained his balance and soared straight into the teeth of the gale. When about 100 yards out he turned slightly sideways and allowing the wind to catch him under his broad pinions, rose rapidly in the air and disappeared

over the rocky summit of Ben C—— in a slanting direction, to be lost to my sight. The earliest date of hatching is April 28th. I have known an Eaglet to be in the nest as late as July 5th.

#### CRY.

Eagles are very silent birds. Only once have I heard an adult bird cry, that was at eyrie H. It might be described as a yelling bark ; it was of anger I think, due to her suspecting my presence in the hide. Newly hatched Eaglets give out faint squeaks. As they grow older the yelp becomes a shrill edition of the adult's cry.

Some Eagles appear to be more strictly resident than others and the pair attached to eyrie K are to be found in the near vicinity of the nest all the year round. Judging from newly dropped breast-feathers found in the late autumn, some Eagles appear to roost in their eyries, these are of course of the sheltered type A.

#### FLIGHT.

It is not an easy matter to estimate the speed at which any bird flies and the difficulty is increased when we are dealing with a large and wary bird like the Eagle. Owing to its habit of soaring and the great distance at which the observer usually watches the bird the speed is liable to be under estimated.

I have noted an Eagle appear over the summit of one hill, cross a wide glen and disappear over a second hill. The distance would be about three miles and the time two and a quarter minutes. I had two good landmarks to go by and judged the distance as well as I could with the aid of a large scale ordnance map. As I know the ground fairly well, the chance of error is minimized, but of course it is only approximate.

I have, however, seen an Eagle in a hurry and it opened my eyes to the speed capabilities of a large bird. I was on my way to eyrie K in late autumn, when suddenly I heard a swish of wings, reminding me of the sound caused by the rapid manœuvring of a Peregrine, though to a much greater degree. Looking up I saw an Eagle, a cock bird, I think, about 200 feet above me attacking a Raven. It was not the playful sparring that often goes on between these birds, or between " Hoodies " and Eagles which I have witnessed on many occasions, but in deadly earnest. For the next few seconds the Eagle gave an exhibition of aerial acrobatics as fine as any Peregrine. The Raven just escaped destruction by diving headlong to earth and taking refuge in a ravine among some stunted trees. A



second Raven about one and a half miles away had been pestering another Eagle, presumably the mate of the first bird. Almost as soon as the cock Eagle started after him the second bird fled across the glen. In spite of the start he was rapidly overhauled, in fact the smaller bird seemed to be stationary when compared with the speed of the Eagle, whose broad pinions were moving at an astonishing rate. Unfortunately both birds disappeared in a bank of mist and I could not see the result of the chase, though I heard a few faint frantic croaks from the Raven which seemed to be in desperate straits.

This affair, though outside the breeding-season, took place in the Eagles' nesting glen. I have seen a pair of Ravens hustle an Eagle out of the glen in which they nested, though this was in the autumn also. Perhaps it is a case of territorial rights.

\* \* \* \* \*

It is more or less certain that a young Buzzard will kill and eat his weaker brethren in the nest. Does this happen among Eaglets? Two nests I visited each contained an Eaglet about two days old and an egg half hatched. Both hatched and hatching birds gave out faint squeaks and the latter appeared to be quite healthy and normal. I returned to one nest ten days and the other three weeks later, and found only one bird in each. Repeated searches revealed no signs of the missing birds. Food was not over plentiful at one nest, but there was no lack of it at the other.

It would be of interest to have the opinions of others as to the possibilities of cannibalism among Eaglets.

I have met certain keepers who have affirmed that an Eagle in time of danger will carry her young to an alternate eyrie or to a quieter locality. It seems unlikely, but perhaps some of your correspondents could throw light on this problem.

# NOTES ON THE COURTSHIP OF THE TUFTED DUCK AND ITS DISTRIBUTION IN SCOTLAND.

BY

HENRY BOASE.

THE display of the Tufted Duck (*Nyroca fuligula*) has proved to be of a somewhat indefinite nature. That this is merely the result of insufficient observation on the part of the writer may prove to be the case, but the fact remains that only on one or two occasions during several years has anything definite in its courtship been seen. The writer puts on record the various items of behaviour which have come under his notice with the reservation that these at least give some idea of the behaviour during the ordinary hours of daylight, but may be incomplete.

In central Scotland, at least, it would appear that the Tufted Duck is for the greater part a summer visitor, arriving in April and departing in September. In the eastern Tay area the male predominates to a large extent on salt water during the winter. In fact, only about ten per cent. of the total winter numbers have been females or, as may be the case, immature male birds still retaining a plumage similar to that of the female. On inland waters during the same period, while the numbers met with have been small, these have been almost entirely females or, as before, perhaps immature males indistinguishable from them. In the end of March and in April males arrive, and for a time predominate in numbers, on the inland waters, while, a little later, females may exceed the number of males present. These, however, pass on before mid May.

During the earlier part of the year the sexes keep apart ; later on a small proportion separate out as pairs, leaving still the greater number in parties, and not until the main arrival of males is there any sign of excitement and display. The nature of these early pairs demands some explanation as contrasted with the later arrangements. The position is quite different from, say, Mallard, where it would seem that the pairs keep together during almost the whole year, and even in September there is clear evidence of the existence of pairs in the packs then assembling. There is a suggestion in the immediate response to weather influence of the existence of a more or less resident population of Tufted Duck ; on the other hand, as already stated, the males arrive on salt water in great excess, so that the binding of the pairs, if it exists at

all, must be very slender. From what has been seen, it seems that the immigrant males, coming before the females, exert their wiles to rob the wintering males of their mates. This question may be further complicated by the apparent surplus of males which pass through east Perthshire each spring, which, in itself, may indicate the continued tendency on the part of this species to extend its range in Scotland.

Coming to the courtship, a simple incident of this was seen on April 19th, 1922, when at least two males were showing attention to a female. The female showed a desire to avoid the males and swam from them with head held high while the males pursued, calling a note "tee-wee-wee," recalling that of the domestic chicken. At times, one or other of the males bobbed the head by rapid extension and retraction of the neck, and the female showed its interest by jerking the bill upwards when the males lost heart. After a minute or two, all three seemed to forget their mutual excitement and turned aside to preen or feed.

A display seen on March 30th, 1924, showed points of a more definite character. In all, seven birds took part and these appeared to be grouped as follows:—one pair (the subject of the attention), one provisional pair, two males, and a female. The female took no part in the incident; she merely followed round as an interested spectator. The main interest lay in the female of the first pair. She was swimming along with head held high accompanied by her mate, while the other mated (more or less) male and the two unattached males pursued. The first male (*i.e.* the mate of the female pursued) seemed somewhat dismayed by the attentions shown to his mate and showed his resentment by hunching up his shoulders and pulling his head well down, looking to all appearances thoroughly disgusted. He also seemed to fear the other males and, on their approach, always dodged round his mate so that she lay between him and the pursuers. Meanwhile, the female of the second pair was doing what she could to get her mate to relinquish the pursuit, and tried to edge between him and the other female so that he might turn aside, but he generally managed to be close behind the other female. One of the unattached males endeavoured to make his station right ahead of the first female while the other kept more or less level with her, the whole party moving now this way and now that way as the female tried to avoid the importunities of the strangers. She kept a close watch on them, holding the head high in contrast to the more crouching (or short-necked) attitude of the males and the hunched-up appearance

of her mate. On one occasion one of the males (it appeared to be one of the two unattached males) made formal display, swinging the head back so that the nape touched the back, the bill standing up at right angles, in a manner recalling the Golden-eye but with the difference that the neck is not, in the case of the Tufted Duck, extended to its limit. This was, however, the only evidence of real display and soon the participants tired of their game and scattered, having fought their battle of manœuvre without any show of temper. The clamour of the Black-headed Gulls on the loch masked any calls which may have been uttered.

A further period of display was watched on April 17th, 1924, when several groups were fairly active during the evening, the time being between 7 and 8 p.m. (BST.). One group consisted of one female and five males, and one of these swimming near the female showed that attitude of disgust already described, while the female held the head high. At intervals the female tossed her head, twitching the bill upwards with a sharp motion. The other males pressed in upon the female, whose attendant male paid no heed, merely keeping close to her. She, on the other hand, showed more spirit and twice turned upon the males with lowered head and extended neck level with the water and charged upon and scattered the males pressing in. One of the strange males was not to be dismissed so easily and made formal display, dipping the bill and throwing back the head upon the back as already outlined.

On the same evening the female was seen swimming along in the usual attitude of superiority with two males in attendance. The trio passed near two other males which seemed to be looking for some excitement and these joined the little party. The female immediately turned threateningly, and the two uninvited males made as though to retire, but so soon as the female had resumed her journey they accompanied the three once more. Again she turned with a determined air, and the two unwanted males wheeled about and retired, while the party of three resumed their passage.

Again, on the same evening, a pair was swimming along, the male in the usual crouching attitude and the female with neck erect, when another male drew near. The female swam along midway between them, holding her head high and tossing the bill at intervals, turning first to the one and then to the other. The stranger displayed at intervals in the customary manner described, while the other made no sign of any interest in the proceedings. Finally the female drew off with her original escort while the other male retired.

On another occasion and at another loch free from the crowds of Gulls, the females were found to call a low note "uk" when tossing the bill, while on this particular occasion the males present, while carrying out the formal display described, showed a definite trick of rising on the water and stretching the neck, shaking the head as they did so, which may have been with intent of showing the better the crest or tuft and the fine gloss of the dark areas of their plumage.

The various performances detailed are the only definite points of behaviour which have come under notice during the ordinary hours of watching. The Tufted Duck spends most of the day in preening and sleep, particularly in the early spring, and the inference is that much of the courtship must be done in the early morning or after dusk, times at which the writer has not found opportunity of investigating. Certainly the rather marked interest in display in the evening points to something of the kind.

There is in the display of the Tufted Duck something which recalls the behaviour of the Eider in like circumstances—the marked activity of the female as compared with the male, her more aggressive manner, and the way in which a number of males, of which only one or two seem ardent, throng the female. The toss of the bill and the attitude of the female is almost identical with the like behaviour of the female Eider.

The extended period of the display is also remarkable, for nesting, so far as east Perthshire is concerned, is from the middle of May. The display has been seen so early as the end of March, while the appearance of definite pairs even before that date suggests even an earlier beginning, which would bring the total period of courtship to something approaching two months.

In connection with the mating of the Tufted Duck was an incident seen on June 5th, 1925, when a drake made a most determined attempt to pair with a female which resisted with the greatest vigour. The male had been swimming to and fro before a reed-bed for some time as though in wait, and on her appearance made a rush at the female. She dived immediately and the two birds splashed and struggled and floundered to and fro in the open water. Several times the drake got hold of the duck but was shaken off, and finally the duck escaped into the reed-bed once more, where she was left unmolested. The fight lasted two or three minutes and other Tufted Duck in the vicinity looked on with interest.

In Scotland the Tufted Duck shows some peculiarity of distribution. So far as the writer has traced, the bird seems

to stop short in a remarkable way in western Perthshire. On the lochs of the Trossachs area (not including the Lake of Mentieth), the lochs of Balquhiddy and Glen Dochart, the lochs west of the Tay-Tummel-Garry line (with the exception so far as the writer is aware of one small loch in the Strath-tummel sector), in Rannoch and probably all the lochs of the west about Loch Awe (the writer has examined only the more promising) the Tufted Duck seems to be entirely absent. On the other hand, in the area east of the Tay-Tummel line, the bird is moderately common on the lochs of the southern border of the Grampian mass. In the Tummel area it does not seem to be making any headway, at least so far as the last four years are concerned, and the writer is inclined to think that to some extent the Tufted Duck has more than spent the impetus of its great expansion, more particularly as in his own experience in east Perthshire the numbers nesting now are markedly less than did so in 1911 to 1913.

# NOTES

## NOTES FROM WEST CORNWALL, 1925.

BLUE-HEADED WAGTAIL (*Motacilla f. flava*).—A pair bred at the Marazion Marsh, near Penzance, for the third year in succession. The first bird I saw was a male, on April 26th, and I saw a pair on April 29th. I watched building take place in May, and the procedure was always the same. The female did all the building while the male merely followed her about, perching near her when she gathered material, flying after her when she took it to the nest, and perching near the nest while she arranged it. I did not locate the nest exactly till May 31st, when it contained six eggs, with the female incubating, as she was on all my subsequent visits up to June 11th. On the latter date one young bird had hatched, but when I visited the nest again, on the 19th, it contained only an unfertile egg. The young must have met with some disaster as they could hardly have fledged in eight days and this is borne out by the fact that, on July 18th I found a second brood of three. These had left the nest by July 20th. Both nests were normally constructed, the first containing only a few feathers and the second none at all (*Cf.* Vol. XVIII., p. 165). Both contained small scraps of rabbit's fur.

A second and solitary male was about the Marsh in the latter part of July and this was the only indication I saw of any increase in numbers, though this might well have been expected after the successful fledging of a brood in both 1923 and 1924.

YELLOW WAGTAIL (*M. f. rayi*).—A pair bred at the Marazion Marsh in 1925. I found the nest on June 21st, built in the side of a tussock and containing six young.

Although a regular spring and autumn passage migrant, this is the first occasion when breeding has been definitely proved in west Cornwall, but Yellow Wagtails, apparently breeding, have been seen at the Marazion Marsh in previous years and in June, 1924, I saw a pair at Gunwalloe, near Helston, which, judging by their behaviour, had a nest in the vicinity. The only previous records of the nesting of this species in Cornwall are those given by Dr. Clark who says that it "has nested several times in the east and middle of the county" (*Victoria History of Cornwall*, I., p. 333). From his general survey of the county in an earlier portion of his article, it would appear that this refers to the south-east of

the Tamar-Fowey District and to the Truro-Falmouth District.

WOODCHAT SHRIKE (*Lanius senator*).—A male frequented a small patch of furze- and thorn-bushes at the Marazion Marsh from May 21st to 28th. The bird was in beautiful plumage and was easy to approach. The only recent occurrence in Cornwall appears to have been on May 12th, 1908, (*B.B.*, III., p. 271), and the only other records for the county are those given by Rodd for Scilly (*B. of Cornwall*, 1880, pp. 191 and 201).

ROBIN (*Erithacus rubecula melophilus*).—On May 7th, I found a Robin's nest containing five eggs but lacking the usual lining of hair. I met with a somewhat similar occurrence on June 20th, 1921. In that case four eggs were laid on the bare earth of a hole in a wall, while a semi-circular rim of moss in front was the only nesting-material used.

RUFF (*Philomachus pugnax*).—There was a male, apparently still in winter plumage, at the Marazion Marsh from March 7th, to 18th. On the latter date another male, with an incomplete white ruff, had arrived. Both stayed till March 20th.

This record brings the total of birds of this species observed in Cornwall in spring to seven. Four occurrences are given in *Brit. Birds*, XI., p. 140, and one was obtained at Scilly in March, 1885 (*Clark, Vict. Hist. of Cornwall*, I, p. 344).

AVOCET (*Recurvirostra avosetta*).—I saw a party of three on the Eastern Beach, Penzance, on May 17th. They were fairly easy to approach and I had several good views of them, both when feeding, preening and flying. The tide was low and they fed busily in the shallows. On the next day they had gone.

Single birds of this species have been observed in Cornwall on five previous occasions, the last occurrence being in 1900.

G. H. HARVEY.

#### WAXWINGS IN WESTMORLAND.

ON December 11th, 1925, I saw four Waxwings (*Bombycilla garrulus*) fly from a thorn bush near Glenridding, by the side of Ullswater; about three-quarters of a mile further on I saw another.

LENORE F. MARSHALL.

#### AMERICAN BITTERN IN CO. KERRY.

MR. C. PEET, Arabella, Tralee, shot a male American Bittern (*Botaurus lentiginosus*) in a bog near Tralee on November 10th, 1925; it was sent for identification. It was in beautiful plumage and fat condition.

W. J. WILLIAMS.



## PINK-FOOTED GOOSE IN HERTFORDSHIRE.

ON the afternoon of January 16th, 1926—a bitterly cold day after heavy snow on the 15th—a Grey Goose of sorts dropped to the Wilstone Reservoir and joined a little bunch of Mallards on the water. It stayed for some ten minutes, swimming with the ducks, splashing and bathing, then rose and went off at a considerable height to the S.W. Its demeanour suggested a really wild bird and not an “escape,” for whilst on the water it was constantly on the alert, and twice was obviously startled by the hoot of a distant motor-car. Its short, pink-banded bill, easily discernible through my telescope, proclaimed it a Pink-footed Goose (*Anser brachyrhynchus*), a species about which hardly anything is known in Hertfordshire.

CHARLES OLDHAM.

## NOTES FROM STAFFORDSHIRE, 1925.

THE following notes are from observations throughout the year at the most westerly of the large Staffordshire reservoirs, to which my notes in Vol. XVII. (p. 139) and Vol. XVIII. (p. 241) also referred.

Once more duck have been very plentiful. Mallards (*Anas p. platyrhynchos*) were probably more abundant than ever. Gadwalls (*A. strepera*) were seen on each visit from May to September; a pair was seen several times and on May 2nd, in addition to the pair, there were three ducks or immature drakes; the largest number was a flock of fourteen that flew away from the reservoir on August 16th—some of them certainly, and I think all, were Gadwalls. Teal (*A. c. crecca*) were always present and in winter abundant; as early as September 6th there was a flock of 150 to 200. Wigeon (*A. penelope*), the most abundant duck in winter, did not remain throughout the summer; by April 18th there were only six, and two or three on May 2nd were the last seen till September 21st. On two occasions only there were drake Pintails (*A. a. acuta*)—two on October 17th and one on December 28th—but there were almost always from twenty to several score Shovelers (*Spatula clypeata*), though on December 28th we could not see more than six or eight.

Pochards (*Nyroca f. ferina*) were less frequent than usual, though there were seventy present as early as August 16th. There were always Tufted Ducks (*N. fuligula*) in limited numbers—never in such large flocks as the other duck; however, on May 2nd they were the most plentiful duck, one flock alone numbering over one hundred; on June 20th one duck was followed by ten youngsters.

In the winter months and up to mid-April from twenty to almost forty Goldeneyes (*Bucephala c. clangula*) were always present, and we counted eight adult drakes together on February 22nd; on April 18th the drakes were displaying—raising the feathers of the crown and pointing their bills straight up in the air; on May 2nd there were still ten, but none remained during summer and by October 17th only two brown-headed birds had reappeared.

Brown-headed Goosanders (*Mergus m. merganser*) were present twice: three on February 22nd and one on December 28th; on the latter date there was a Smew (*M. albellus*)—also a brown-headed bird.

On February 22nd we saw one Bewick's Swan (*Cygnus b. bewickii*), the first seen here since the 1922-3 winter; it was a fully white bird with a black band on the culmen of the bill, but this black band proved on near approach to have a yellow centre a little below the base of the bill.

One Black-necked Grebe (*Podiceps n. nigricollis*) appeared on September 6th and Great-crested Grebes (*P. c. cristatus*) were never absent.

Waders did not find the margin so attractive as usual; except for one Dunlin (*Calidris alpina*) on February 22nd and five on April 18th none but the ordinary species, such as Common Sandpipers, Redshanks, etc., were seen.

A Black Tern (*Chlidonias n. niger*)—an immature bird—was hawking over the water on September 6th and 21st, and on the former day was accompanied by two Common or Arctic Terns.

As noted previously Gulls were never plentiful as on the Cheshire meres, though Black-headed Gulls (*Larus r. ridibundus*) were almost always present—twenty or more throughout the winter months and odd birds in the summer. Common Gulls (*L. c. canus*) occurred only twice—single birds on August 16th and October 17th; and Lesser Black-backed Gulls (*L. fuscus affinis*) twice also—one in May and a flock of fourteen on September 6th.

A. W. BOYD.

### SURF-SCOTERS IN NORFOLK.

ON October 2nd, 1925, wind E.—S.S.W., I saw seven Surf-Scoters (*Oidemia perspicillata*) in a rather choppy sea off Scolt Head. The birds were fairly close inshore, so that the white patch on the nape was distinctly visible on three of them. This is the first record for East Anglia.

E. L. TURNER.

## GANNET INLAND IN CHESHIRE.

IN view of Mr. H. E. Forrest's record (*antea*, p. 213) of two Gannets (*Sula bassana*) near Shrewsbury, on October 25th, 1925, it is perhaps interesting to note that a young Gannet about five months old was found alive on the highroad at Sandiway, in Delamere Forest, Cheshire, on October 28th, 1925—just forty miles further north. It was given to my wife on the following day and was fed with fish; it lived on or by a duck-pond till November 2nd and then disappeared; presumably it flew off as it had evidently become stronger and flapped its wings frequently.

A. W. BOYD.

## STOCK-DOVE BREEDING IN CO. DONEGAL.

ON April 25th, 1925, whilst walking through a heavily timbered demesne on the shores of Sheephaven Bay, I heard the unmistakable note of the Stock-Dove (*Columba æ. ænas*), and shortly afterwards a bird of this species dashed out from the centre of an immense lime, round the stem of which, and supported by the out-growths of the tree, was collected a deposit of sticks, leaves, and rubbish, the accumulation of many years. After a long search I discovered a nest containing two eggs, the latter being placed at the end of a sort of tunnel in the debris, and at least two feet from the entrance. A few roots and fine twigs formed the nest. Shortly afterwards I found another nest with eggs in a similar situation, and not far from the first. There are no hollow trees in the demesne. The keeper told me he had first noticed Stock-Doves in the preceding summer. This bird has not previously been recorded as breeding in co. Donegal, but as it has been observed in co. Clare and co. Galway it is evidently extending its range along the western seaboard of Ireland.

C. V. STONEY.

## KENTISH PLOVER AND SHORE-LARKS IN NORFOLK.

ON October 7th, 1925, wind N.N.E., two Kentish Plover (*Charadrius a. alexandrinus*) were feeding on the saltings of Scolt Head Island with some Shore-Larks (*Eremophila alpestris flava*). Their small size attracted my notice, and as they allowed me to approach within a yard of them, their dark legs were easily seen.

E. L. TURNER.

## PASSING MIGRANTS IN NORTH WORCESTERSHIRE.

SEVERAL interesting birds appeared at the North Worcestershire reservoirs during the autumn of 1925. A single Black

Tern (*Chlidonias n. niger*) was flying over the Upper Bittell reservoir on September 14th. There was no sign of it on the 15th, but on the 17th there were two over the Lower Bittell. On the 23rd there were three Black Terns (for a short time four), and one Arctic Tern (*Sterna macrura*) over the Lower Bittell. The Arctic Tern and one Black Tern were seen again on September 24th. They had gone on the 29th. On the 23rd I put up a pair of Garganey (*Anas querquedula*), or perhaps three, and these I saw again on October 1st. It is almost certain that they were present also on the 14th. An Eared Grebe (*Podiceps n. nigricollis*) was also on the reservoirs during all this period. I had a particularly good view of its upturned beak on October 1st.

On September 23rd I saw what appeared to be a pair of Pintail (*Anas a. acuta*) flying over the further side of the Upper Bittell reservoir. They seemed to settle, but when I got round the reservoir I could not find them again.

After October 1st I saw nothing of special note until the 22nd, when Mr. H. L. Wilson and I watched a fine drake Long-tailed Duck (*Clangula hyemalis*) in full winter plumage on the Lower Bittell reservoir. It was repeatedly diving, more or less in company with an immature Golden-eye (*Bucephala c. clangula*) when first we saw it, but later a small party of Tufted Ducks (*Nyroca fuligula*) swam past it, and it followed them to the far end of the reservoir. I could not see it on the 25th or subsequently.

Although there was a good deal of mud by the reservoirs throughout the early autumn, I saw no mud-loving waders except a few Dunlin (*Calidris alpina*). H. G. ALEXANDER.

#### GREAT BUSTARD IN CO. CORK.

A FINE female Great Bustard (*Otis t. tarda*) was shot near Castletown Bere on December 9th, 1925. Although in good condition it only weighted  $7\frac{1}{2}$  lbs., and was examined in the flesh by Mr. Moffat, our leading Irish ornithologist.

W. J. WILLIAMS.

BITTERN IN KENT.—Mr. James M. Harrison informs us that an adult male *Botaurus s. stellaris* was shot on December 23rd, 1925, in a meadow close to Sevenoaks, where it was frequenting two small and secluded ponds. The bird's stomach contained a few bones of a small fish, some strands of water weed and the remains of a beetle (*Dyticus marginalis*).

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# ORNITHOLOGICAL REPORT FROM NORFOLK FOR 1925.

BY

B. B. RIVIERE, F.R.C.S., F.Z.S., M.B.O.U.

THE first two months of the year 1925 were noticeable for severe gales and exceptionally mild weather, and a consequent scarcity of wildfowl. On February 4th, a lovely sunny day, a Blackbird was singing in my garden, nearly a month in advance of the date upon which I usually first hear one. A very light fall of snow, the first of the winter, occurred on February 21st, but throughout March there were several snowstorms and hard frosts. A cold wet April was followed by three months of exceptionally fine, warm weather, save for a bitterly cold, wet week between 21st and 28th of June, which played havoc with the young Partridges.

There is little to remark upon the spring migration. Very early Cuckoos were heard at Attlebridge on April 7th (Miss Waterfield) and at Woodbastwick on April 11th. The usual westerly passage of Hirundines along the north Norfolk coast was in evidence throughout May, and was also observed at the Lynn Wells Light Vessel at the mouth of the Wash (W. S. Sharman), whilst upon several days during the same month Willow-Wrens, Whitethroats, Wheatears, and other small migrants were to be found amongst the suda bushes at Cley and Scolt Head (R. Pinchen and Miss Turner). A tremendous rush of Swifts from east to west at Scolt Head was recorded by Miss Turner between May 28th and June 3rd, these birds passing continuously on June 1st, during a south-westerly gale, from 6 a.m. till 6.30 p.m.

A scarcity of Spotted Flycatchers was noted by several of my correspondents. The pair which usually nest in my garden failed to put in an appearance, and Mr. G. H. Gurney tells me that there were none at Keswick, where last year he had fourteen nests.

As usual the autumn migration was very much more in evidence than that of the spring. A big passage of Waders took place on the nights of August 19th and 21st. On the former night large numbers of Curlew were passing over Yarmouth (A. H. Patterson), and on the latter Waders were heard most of the night, both over Norwich and at Haisboro', where Major A. H. Daukes identified the calls of Golden and Grey Plover, Curlew, Redshank, Godwit, Oystercatcher, Whimbrel and Dunlin.

A big arrival of Passerine birds must have taken place about September 10th, on which day Mr. G. H. Gurney wrote me that the fields about Cringleford were full of Song-Thrushes, Blackbirds, Sky-Larks, Robins and Goldcrests, and when at Paston two days later, I found an extraordinary number of Song-Thrushes in the root-fields.

An all-day passage of Lapwings from east to west was noted at Cley by Mr. A. H. Macpherson on September 28th and 29th, and was also recorded on the same two days by Mr. Sharman on the Lynn Wells Light Vessel.

The biggest rush of the late autumn migrants, however, took place during the last week of October, and this included Rooks, Lapwings, Starlings, Fieldfares, Redwings, Blackbirds, Sky-Larks, Chaffinches, and Goldcrests. At Scolt Head, where I was the guest of Miss Turner during the last three days of the month, thousands of Rooks and Starlings, together with Lapwings and Sky-Larks, were travelling west all day, whilst Redwings were heard passing each night. On October 25th and 26th Rooks, Fieldfares, and Chaffinches were coming in at Yarmouth, where also on the 28th and 30th there was another big rush of Fieldfares and Blackbirds (A. H. Patterson). At Paston on 29th the fields were full of Redwings, and on 31st Starlings were passing west-south-west all day, and many Goldcrests were met with in the root-fields and hedges (R. C. Bell). A notable feature on the more southerly portion of the coast-line appears to have been the extraordinary number of immigrant Blackbirds. Mr. Patterson refers to them as "swarming" at Yarmouth on October 30th, whilst writing from Southwold on November 10th Mr. C. E. Alford states that "Blackbirds (chiefly immature males) may be seen in almost incredible numbers" (*Brit. Birds*, XIX., p. 209).

The arctic weather which set in on November 10th and lasted until Christmas, brought thousands of Duck to Norfolk in advance of their usual time, and Fritton Decoy beat all its own records with a take of 2,700 duck up to December 31st, these being nearly all Mallard. (Major Hon. F. Crossley.)

Many Woodcocks also put in an appearance. Thirty-one were killed at Somerleyton on December 28th (Crossley), whilst at Holkham on four consecutive days from December 8th to December 11th the bags were 49, 31, 37, and 47, the total bag of Woodcocks up to the end of January 1926 being 334, which is a record for this shoot (A. E. Tower). Record bags of Snipe were also made, during this hard weather, on Mr. Russell Colman's shoot at Whitlingham, the Whitlingham Sewage farm providing an open feeding ground when all others

were frozen over. Four hundred and fifty Snipe were shot here up to the end of the first week of January, 1926, the best days being : November 21st, 20 ; November 28th, 17 ; December 1st, 19 ; December 2nd, 27 ; December 3rd, 89 ; December 5th, 144 ; and December 9th, 13. On the biggest day, December 5th, there were five guns, and nearly all the birds killed were driven (R. Colman).

Several rarities occurred during the year, amongst which may be mentioned an Aquatic Warbler, Red-breasted Flycatcher, Rock-Dove, Night-Heron, Kentish Plovers, Gull-billed Terns, and Surf-Scoters, particulars of which will be found under the classified notes.

#### CLASSIFIED NOTES.

COMMON CROSSBILL (*Loxia c. curvirostra*).—Mr. N. Tracy reports that a pair of Crossbills reared a brood this year in the King's Lynn district, the nest being built in January, whilst Mr. H. A. Gilbert writes me of a nest with four eggs in south Norfolk, and another pair building, on March 21st.

There was some evidence of an immigration of Crossbills into East Anglia during the autumn. A male was caught alive on the Outer Dowsing Light Vessel on July 4th and was taken ashore and released (W. S. Sharman), whilst early in September two more males were taken on the Haisborough Light Vessel (A. H. Patterson). In November many were reported by the keeper to be at Elveden (Suffolk) and on November 20th three were seen in a garden in Ipswich (*Field*, November 26th, 1925). It will be interesting to see whether there is any marked increase in the numbers breeding in 1926.

WOOD-LARK (*Lullula a. arborea*).—The Wood-Lark has, in my experience up to now, been confined as a nesting species to a small area in the south-west part of the county near the Suffolk border. In 1925, however, I was fortunate enough to discover a small colony nesting in an entirely new locality a few miles north of Norwich, and in two of the three nests which I found, young birds were successfully reared. As the ground which they are on is private and well-protected, this little colony should soon increase and spread.

GREY WAGTAIL (*Motacilla c. cinerea*).—A pair of Grey Wagtails again nested at Taverham for the third year in succession and reared three broods, the three nests being all within 20 yards of each other. (Capt. Lloyd.)

CONTINENTAL BLUE TITMOUSE (*Parus cæruleus cæruleus*).—The arrival of Blue Tits upon our east coast from the Continent

in autumn has long been suspected, and in Norfolk their frequent appearance upon the coast-line at this time of year—one actually flew on board the Lynn Wells Light Vessel on September 20th this year—and their occasional presence amongst the westerly moving flocks of other autumn migrants, has certainly suggested an immigration from overseas. I am now able to record a specimen of the Continental form of Blue Tit (*Parus c. caeruleus*), the first for England—though one has occurred in Scotland—which was killed at Cley in October 1921. This bird, which is a female, has a wing measurement of 64 mm., which is the minimum for the Continental race, but its colouring, when compared with the large series in Mr. Witherby's collection, differs from all British Blue Tits, and exactly resembles *Parus c. caeruleus*.

FIRE-CRESTED WREN (*Regulus i. ignicapillus*).—On October 31st at Scolt Head Miss Turner and I were able to identify a Firecrest which obligingly lit upon some basket-work on the sandhills within a yard of where we were sitting, and gave us a sufficiently long and uninterrupted view of its conspicuous white eye-stripe and dark streak through the eye, to satisfy both of us as to its identity.

GREAT GREY SHRIKE (*Lanius e. excubitor*).—A Great Grey Shrike was shot by Mr. E. C. Arnold at Morston on September 12th.

RED-BREASTED FLYCATCHER (*Muscicapa p. parva*).—An immature specimen, the sex of which was not noted, was obtained at Blakeney Point on October 2nd (F. E. Gunn). This makes the fifteenth for Norfolk.

WOOD-WARBLER (*Phylloscopus s. sibilatrix*).—Mr. N. Tracy reports that two or three pairs of Wood-Wrens again nested at South Wootton in 1925. I am indebted to Mrs. Graves of Oulton Lodge for the discovery of another nesting locality in North Norfolk, where she believes a few pairs have bred for the past ten years in a beech wood, and I was able to confirm the accuracy of her observation by watching in her company three males in full song in this wood on June 11th.

AQUATIC WARBLER (*Acrocephalus paludicola*).—A male Aquatic Warbler was obtained at Blakeney Point on September 11th (F. E. Gunn).

FIELDFARE (*Turdus pilaris*).—An unusually early flock of Fieldfares was seen in mid-Norfolk on August 10th by Mr. Stuart Curtler (*Brit. Birds*, XIX., p. 131).

REDSTART (*Phaenicurus ph. phaenicurus*).—The Redstart as a nesting species appears to be still more or less confined to the extreme south-west corner of Norfolk, where, however,

it seems to be holding its own. Mr. N. Tracy had three pairs nesting within his bird sanctuary at South Wootton, one of which reared two broods, and he knew of two other nests in the immediate neighbourhood, while Mr. A. H. Macpherson on April 26th met with seven males within a small area of woodland in another part of south-west Norfolk. One pair at least probably nested within the northern half of the county, as both Dr. Long and Mr. Q. Gurney saw a pair upon several occasions during the summer at the edge of a wood alongside the road between Taverham and Attlebridge.

BLUETHROAT (*Luscinia svecica*).—I have records of only three Bluethroats during the year, viz. : Two at Cley, one on September 7th, and one on October 13th (Pinchen), and one at Scolt Head on September 17th (E. Turner).

KINGFISHER (*Alcedo a. ispida*).—A Kingfisher killed itself against the light of the Lynn Wells Light Vessel at 3 a.m. on September 16th (W. S. Sharman), making the fourth record which I have of this species being killed at lighthouses or lightships off the Norfolk coast in autumn.

LITTLE OWL (*Athene noctua*).—Miss Turner's Scolt Head notes contain records of autumn movements of the Little Owl which seem to suggest a possible migration. On September 1st one appeared to fly in from the direction of the sea and settled upon the Watcher's tent. On October 3rd another appeared to fly in from the sea, whilst on October 15th and October 25th several passed over the hut at dusk calling, and on October 24th one was found early in the morning on the sandhills.

SHORT-EARED OWL (*Asio f. flammeus*).—A few pairs of Short-eared Owls nested as usual in the Broads district. Another nest—the first, I believe, for many years—was found in the "Breck" country, but on the Suffolk side of the boundary. This contained nine eggs which hatched on May 15th (H. A. Gilbert). Yet another pair were constantly seen on Scolt Head throughout the early summer, but their nest was never found (E. Turner).

MONTAGU'S HARRIER (*Circus pygargus*).—The number of breeding pairs in Norfolk was, I am glad to say, well maintained.

HEN-HARRIER (*C. c. cyaneus*).—A female Hen-Harrier was shot at Runham on November 30th (E. C. Saunders).

SPOONBILL (*Platalea l. leucorodia*).—On November 25th a Spoonbill was shot on the Norfolk shore of the Wash and was shown to me in the flesh. It was a very small bird in juvenile plumage, the primary and secondary quill-feathers being

splashed with black. This is the latest date upon which a Spoonbill has occurred in Norfolk, the only other November record being November 21st, 1908, when one was killed on Breydon. Another late bird was seen by the keeper at Salthouse on October 18th and 19th; there being, I believe, only one other Norfolk record for October, viz.: October 5th and 6th, 1905. Two more were seen at Salthouse on July 18th (L. Lloyd), and I understand that several visited Breydon during the summer, but can give no dates, owing to the Watcher's note-book having been unfortunately lost.

NIGHT-HERON (*Nycticorax n. nycticorax*).—On May 22nd an adult Night-Heron was seen by three reliable observers on Wroxham Broad. It flew up from a reed-bed and perched in an alder tree beside the Broad, where it allowed a close approach, and from the description which was given me of its small size, its black mantle, yellow legs and the long white streamers from the nape, there can, I think, be no doubt whatever as to its identification.

BITTERN (*Botaurus s. stellaris*).—Reports of the nesting of the Bittern in 1925 are eminently satisfactory. The number of nesting pairs continues to increase, and there is evidence of a further extension of their nesting area.

PINTAIL × MALLARD HYBRID.—Mr. E. C. Saunders informs me that he received on December 1st a Pintail × Mallard hybrid drake which had been shot at Hickling.

GARGANEY (*Anas querquedula*).—Five pairs nested in their favourite locality in the Broads district this year.

SURF-SCOTER (*Oidemia perspicillata*).—Miss Turner has already reported (*antea*, p. 234) that she was able to identify a flock of seven Surf-Scoters which were swimming in the sea off Scolt Head on October 2nd. This record is, I think, a very interesting one, and it is the first time that this rare vagrant has been observed off the Norfolk coast.

ROCK-DOVE (*Columba l. livia*).—The first example of a genuine wild Rock-Dove, which, so far as I am aware, has ever occurred in Norfolk, was picked up dead—wounded in the breast—at Ludham on Dec. 9th, and kindly forwarded to me by Mr. A. H. Patterson. Mr. Witherby and I have compared this bird with the large series of Rock-Doves in the former's collection, and in colouring, size and type, and especially in the character of the bill, it matches them exactly, and in fact could not be picked out from amongst them. Moreover, to make doubly certain, I showed it to Captain Lea Rayner, a well-known judge of Homing Pigeons, who judges the Homer

Classes at some of the leading Pigeon Shows, and he immediately expressed the opinion that it could not be the produce of any domestic Pigeons, however inbred and "run wild." It must have been a late hatched bird, as it had only moulted the five innermost primaries. Possibly the severe weather prevailing at the time, with blizzards and snow storms, may have accounted for its presence in Norfolk, the nearest breeding-place of the Rock-Dove being, I believe, the cliffs of the Yorkshire coast.

OYSTERCATCHER (*Hæmatopus o. ostralegus*).—In the year 1913 an Oystercatcher's nest was found at Blakeney Point, containing six eggs, and each year since then, within a few yards of the same spot, there has been a nest, usually containing the same number (in 1923 there were six, and in 1924 five). This year this nest contained a clutch of seven, which, however, did not hatch. R. Pinchen the Watcher is fully convinced that two females lay in this nest each year, and he is, moreover, equally convinced that their mate is the same individual male of the original pair which nested at the Point for the first time, after an interval of many years, in 1906. If Pinchen is right, which, from the terms of intimacy he appears to be upon with this bird, I am inclined to think he may be, this would make the nineteenth year of this Oystercatcher's tenancy of this particular ridge of shingle!

KENTISH PLOVER (*Charadrius alexandrinus*).—Miss Turner has already reported (*antea*, p. 235) the occurrence of two Kentish Plover, which she was able to identify at Scolt Head on October 7th.

LAPWING (*Vanellus vanellus*).—A Lapwing, bearing a Witherby ring No. Z. 2166, which was reported by Mr. Skerrett Rogers as having been killed at Cley on November 28th, was, I learn from Mr. Witherby, ringed as a nestling at Cley on June 8th, 1924. It is interesting to find a bird of this species in the locality where it was hatched, during the winter of the following year, and it is an example of how individuals of the same species vary as to the extent of their migratory movements.

SPOTTED REDSHANK (*Tringa erythropus*).—As in the case of the Black-tailed Godwit, fewer Spotted Redshanks were recorded in 1925 than in the previous year. Major Daukes saw one at Cley on August 26th, and single birds were seen by Mr. E. C. Arnold at Cley and Morston on September 9th, September 12th and September 14th, whilst a female in first winter plumage was killed on Breydon on October 22nd (Saunders).



GREY PHALAROPE (*Phalaropus fulicarius*).—One was seen by Mr. A. H. Macpherson on September 19th swimming on the pond at Weybourne.

BLACK-TAILED GODWIT (*Limosa l. limosa*).—Compared with the past few years, very few Black-tailed Godwits appear to have visited Norfolk in 1925, and the only records I have are of one in the Broads district on April 29th (J. Vincent), one at Cley on August 28th, and another at Cley on September 4th (Major A. H. Daukes).

GREAT SNIPE (*Capella media*).—Two Great Snipe were obtained during the autumn, one near Gorleston on September 23rd (W. W. Cook), and one at Warham, now in the Holkham collection, on September 29th (A. E. Tower).

WOODCOCK (*Scolopax r. rusticola*).—A Woodcock's nest was found at Horsford on April 15th containing four eggs, which were later on unfortunately sucked by a hedgehog.

GULL-BILLED TERN (*Gelochelidon nilotica*).—A small party of Gull-billed Terns seems to have found its way to Norfolk in May, upon the 17th of which month Dr. S. H. Long watched one hawking insects over Langmere, whilst upon the same day Mr. A. H. Patterson independently identified four more on Breydon (*Eastern Daily Press*, May 23rd). This is the first occurrence of the Gull-billed Tern in Norfolk since 1906, when one was shot on Breydon on September 5th.

SANDWICH TERN (*Sterna s. sandvicensis*).—Only eight pairs of Sandwich Terns nested at Blakeney Point in 1925, and none at Salthouse, all the remainder having this year gone to Scolt Head, where over 600 pairs nested. The first arrival at Blakeney Point was on April 8th, but the main arrival took place on May 11th and the first egg was laid on May 19th. Out of the eight nests, there was one clutch of three eggs (Pinchen). At Scolt Head the first birds arrived on May 2nd and the first egg was laid on May 13th, and a count of the nests on June 16th showed 341 clutches of two, 257 clutches of one, and 3 clutches of three (E. Turner).

ROSEATE TERN (*Sterna d. dougallii*).—A pair of Roseate Terns again bred in one of the Norfolk Tern colonies, the nest being within a few yards of that of the previous year. Two more pairs are also recorded by the Watcher as having nested in another colony.

BLACK-HEADED GULL (*Larus r. ridibundus*).—No less than five Black-headed Gulls ringed as nestlings on the Continent have been reported in Norfolk during 1925.

No. C. 2461 (Prof. Jagerskiöld) reported from Lynn on February 28th was ringed at Öland in the Baltic on June 23rd, 1924 (*Brit. Birds*, XIX., p. 19).

No. 40645 (Herr Pedersen) killed on Breydon on September 25th, was ringed at Zeeland, Denmark, on June 1st, 1922.

No. 38989 (Rossitten) picked up dead by Mr. J. Ellis on Gorleston Beach on November 18th, was ringed on June 3rd, 1925, at Guhlan, near Dresbitz, Posen, Prussia.

No. 35769 (Rossitten) killed at Yarmouth on December 14th (A. H. Patterson) was ringed in June 1925 on the Island of Riems, Pomerania.

No. 36129 (Rossitten) picked up dead at Old Buckenham on Dec. 20th (A. H. Patterson), was ringed on June 28th, 1925, on the Island of Riems, Pomerania.

GLAUCOUS GULL (*L. hyperboreus*).—An immature Glaucous Gull was shot at Yarmouth on October 14th (E. C. Saunders), and another, also immature, at Blakeney, on December 12th (F. E. Gunn).

GREAT SKUA (*Stercorarius s. skua*).—An adult female was killed at sea off Blakeney Point on September 15th (F. E. Gunn).

## NOTES ON NESTLING BIRDS.

BY

COLLINGWOOD INGRAM.

DURING the war, through the kindness of M. Van Kempen's heirs, I was given the opportunity of examining the extensive collection of mounted birds that this gentlemen had brought together in his private museum at St. Omer. Probably the most interesting feature of this collection was the comparatively large number of specimens in nestling plumage, many of which were new to me.

The following notes (copied from my Journal) were all made at the time, and refer to species not described in Witherby's *Practical Handbook of British Birds*.

I. Roller (*Coracias garrulus*).—Down absent.

II. A newly hatched nestling of the Squacco Heron, labelled "*Ardea ralloides* 7.VI.1901 [Dombrowski]."

Thinly covered with white down, with a buff tinge on the shoulders. On the head there is a distinct crown of coarse, "wiry" down, this being of a brownish-buff colour.

III. A nestling Black Stork probably about three weeks old, labelled "*Ciconia nigra* 7.6.79 Pommern [Schlüter]."

Densely covered with white down, this being long, loose and soft in texture. This down is quite independent of the contour feathers, most, if not all, of which bear minute tufts of a previous generation of down, also white in colour. The primary, secondary and tail feathers do not bear these tufts.

IV. A newly hatched Egyptian Vulture (*Neophron percnopterus*) labelled "*Vultur percnopterus*."

Down white, evenly distributed over the whole body.

V. A newly hatched Spotted Eagle (*Aquila clanga*).—Down white.

VI. The collection contained two young Ospreys, *Pandion haliaetus*, one about two weeks old and the other, apparently, a few days. The following is a description of the younger bird.

Above dusky, smoky-brown, with a conspicuous sandy-buff dorsal streak. Head sandy-buff with a lighter streak on the nape. There is a dark, smoky-brown patch in front and behind the eye. Under surface creamy-white. The dark areas on the back are mottled with lighter buff. The down is short and dense in texture.

A patterned nestling garb in a raptorial bird is very unusual. The newly hatched Lammergeyer (*Gypaëtus barbatus grandis*) has a distinct greyish-brown patch round the eye, but its dense

covering of down is otherwise white, or white tinged with buffish. I believe these are the only two European species showing well-defined markings in the nestling stage.

VII. A newly hatched specimen of the Caspian Plover (*Charadrius asiaticus*) labelled "*Charadrius caspius*. Steppes de Kirghiz [Schlüter]."

Above white with a faint creamy or sandy tinge; more tawny and sandy on the forearm. Crown, back, and forearm spotted with sooty black, the spots being somewhat more massed in the centre of the crown and back. Under surface



NESTLING OSPREY.

white. Down, plush-like, with a silky gloss or lustre on the light portions of the upper parts. No loreal or frontal streaks.

It may be noted that a nestling in down of this species has been described and figured in Dresser's *Birds of Europe*, Vol. 7.

In the *Practical Handbook of British Birds* the nestling of the Sociable Plover, *Chettusia gregaria*, is likened to that of *V. vanellus*. The specimen so named in the Van Kempen collection bears no resemblance to the young of this species and agrees with the description (taken from a coloured plate) given in Dresser's *Birds of Europe*.

## FLEDGING-PERIODS OF SOME BRITISH BIRDS.

BY

T. G. LONGSTAFF AND F. C. R. JOURDAIN.

THE following fledging-periods do not appear in the *Practical Handbook*. The cases are all from my note-books except one Spotted Flycatcher, which I owe to my neighbour, Mr. Ian Bennett. By the fledging-period is meant the number of days in the nest from the first hatching. In order to obtain a perfect "case" the nest must be visited on the day before hatching, on the day of hatching, on the day before leaving the nest, and on the day of leaving the nest; but since the natural period often varies by a day it seems worth while to include a few cases in which the possible error was only one day—as indicated by the word "or" in the following list. The period for the Blue Tit is suspiciously consistent, but the data were obtained from nesting-boxes in 1887, 1923 and 1925, under very favourable conditions. The difficulties of correct observation are great and additional published data are required for all species before we can attempt to discover the controlling factor.

Fledging-period.  
Days.

|                                                              |            |
|--------------------------------------------------------------|------------|
| Lesser Redpoll ( <i>Carduelis l. cabaret</i> ) ...           | 12 and 13  |
| Bullfinch ( <i>Pyrrhula p. nesa</i> ) ...                    | 14 or 15   |
| Great Tit ( <i>Parus m. newtoni</i> ) ...                    | 16, 17, 17 |
| Ditto Second laying, three eggs,<br>2 hatched ...            | 17 or 18   |
| Blue Tit ( <i>Parus c. obscurus</i> ) ...                    | 21, 21, 21 |
| Long-tailed Tit ( <i>Ægithalos c. roseus</i> )...            | 18         |
| Golden-crested Wren ( <i>Regulus r. anglo-<br/>rum</i> ) ... | 14         |
| Spotted Flycatcher ( <i>Muscicapa s.<br/>striata</i> ) ...   | 12 and 13  |
| Robin ( <i>Erithacus r. melophilus</i> ) ...                 | 12         |
| Hedge-Sparrow ( <i>Prunella m. occiden-<br/>talis</i> ) ...  | 15         |
| Wren ( <i>Troglodytes t. troglodytes</i> ) ...               | 16 or 17   |

For the Wryneck (*Jynx t. torquilla*) the *Handbook* gives incubation as "not less than two weeks and probably longer": my only two complete cases each give 11 days from the laying of the last egg to the hatching of the first, and all the fertile eggs hatched within twenty-four hours of one another. Fledging-periods were 18 and 19 days.

In the case of a Nightjar (*Caprimulgus eu. europæus*) the young remained for 14 days *within* 10 feet of the "nest," making no attempt to fly: when I revisited the site on the 18th day the young were gone, nor could the hen, which had always been very demonstrative, be found in the neighbourhood.

I can confirm the *Handbook* fledging-periods for the Red-backed Shrike (*Lanius c. collurio*) 15 days (1 case); White-throat (*Sylvia c. communis*) between 10 and 12 days (1 case); Dartford Warbler (*Sylvia u. dartfordiensis*) 11 or 12 days (1 case).—T.G.L.

The study of the Incubation and Fledging Periods of Birds is attended in most cases with so many difficulties that all contributions based on careful observation are very welcome. We can only expect to reach the final truth by the mean of many independent workers. Even since the publication of my earliest notes in the *Practical Handbook* on the subject, a good deal of additional information has come to hand, modifying in some cases the results then arrived at. In the present note I propose to treat only of those species mentioned by Dr. Longstaff.

Lesser Redpoll (*Carduelis l. cabaret*).—Dr. Longstaff's estimate of the fledging-period agrees fairly closely with that of Mr. G. C. S. Ingram, 11–12 days.

British Bullfinch (*Pyrrhula p. nesa*).—Miss F. Pitt has recorded a flying-period of 16 days in one case observed.

British Great Tit (*Parus m. newtoni*).—In the case of this species there is rather a remarkable discrepancy in the records. Dr. Longstaff's four records all range between 16 and 18 days. C. Kingsley Siddall (*Zool.*, 1910, p. 207–210; *Br. B.*, III, p. 186) in a very careful study of the history of one brood, noted that the nestlings were fully feathered on the 21st day, and left the nest on the 23rd day! I find in my notes for 1917 that a Great Tit, which began to sit on May 26, in Berkshire, had all the young still in the nest on June 30th, while the young left on the following day. Allowing 14 days for incubation, this would give a fledging-period of at least 21 days. As this is a species on which observation is easy, it would be interesting to receive records, preferably from different districts during the coming spring.

British Long-tailed Tit (*Ægithalos c. roseus*).—Mr. R. H. Brown gives 15 days in two cases watched, as against 18 days by Dr. Longstaff.

British Goldcrest (*Regulus r. anglorum*).—Mr. J. Steele

Elliott estimates the fledging-period as 16-19 days, considerably longer than 14 days given above.

Spotted Fly-catcher (*Muscicapa s. striata*).—Here the observers are pretty closely agreed: 13 days (S. E. Brock); 12-13 days (J. Steele Elliott); young brooded for 12 days only (J. H. Owen).

British Robin (*Erithacus r. melophilus*).—R. H. Brown gives 11-13 days and A. J. Wilkinson 14 days.

Wren (*Troglodytes t. troglodytes*).—16 days in one case (F. C. R. Jourdain).

With regard to the incubation period of the Wryneck, previous information has been of a very unsatisfactory nature and Dr. Longstaff's records are most useful. The fledging-period is variable. S. Kendall Barnes gives it as 20 days, but notes that one young bird remained a week after the rest. Dr. J. H. Salter (*in litt.*) gives 21 days, and he also observed that one young bird remained three days after the rest had gone and was fed by the parents.

Nightjar (*Caprimulgus eu. europæus*).—O. R. Owen notes that the young remain by their birthplace for 11 days and J. S. T. Walton states that the period is just over two weeks.—F.C.R.J.

# NOTES

## MAGPIES KILLING FULL-GROWN RABBIT.

On December 15th, 1925, there were still nearly two inches of snow on the ground at Barton, Cambs, and in the morning it was fine though cold. I passed through a small disused chalk quarry, extensively burrowed by rabbits, and rather more than half an hour later returned to it, seeing, from the top, a pair of Magpies (*Pica p. pica*) fly off the body of a rabbit in the snow; I had previously seen these Magpies fly to the quarry from my position on the hill above, about a quarter of an hour before. Descending, I examined the snow around the rabbit, and found that except for a few marks where the Magpies had hopped round it, and one or two easily distinguishable rabbit tracks there was nothing whatever. A couple of yards up the slope under a small black-thorn bush I found the "form" where the rabbit had been, and a scurry in the snow to show where it had rolled or wriggled down to its present position. Both its eyes were pecked out, though it was lying on its side. Examination showed that it had not been bitten behind the ear, where one would expect to see the work of a stoat, nor had it apparently suffered any other injury than that to its eyes. I "staled" it, found it limp and moderately warm, and, taking it home, it turned the scale at 3 lbs. 11 ozs.

I can only suggest that these Magpies, driven by hunger, and the tempting opportunity presented by a crouching rabbit (for the "form" was quite open above) had dropped down from the bush, and had either singly or together pecked one or other of its eyes out. If it had not been done in the snow I should not have believed it possible, but seeing that there were no tracks in the snow, it must have been done by birds, and presumably by Magpies. Certain it is, however, that the rabbit was not on the open ground where I had passed about 35 minutes before.

G. W. THOMPSON.

[A very similar case is reported in the *Zoologist*, 1845, p. 1072, from the *Lancaster Gazette* of June 21st, 1845, where it is stated that a carter, hearing a strange noise in a field by the roadside between Preston and Blackburn, looked over a hedge and saw a Magpie attacking a half-grown rabbit, and endeavouring to pick out its eyes. It was so intent on its work that it allowed the man to get within a few yards before



leaving. The rabbit was so much injured by the Magpie's attacks that it died shortly after.—F.C.R.J.]

#### CROSSBILL NESTING IN NORFOLK.

I HAVE recently returned from Norfolk where I saw a Crossbill (*Loxia c. curvirostra*) sitting on her eggs. The nest when found on January 31st, 1926, contained four eggs and the bird had evidently been incubating a few days. When visiting the nest later the female sat so tight, as is frequently the case with these birds, that she could only be induced to show the contents of the nest by coaxing her with a twig.

I was also authoritatively informed that a nest of four eggs was found a fortnight before Christmas, the eggs being shared out amongst the boys who looted the nest !

EDGAR P. CHANCE.

#### TREE-PIBIT'S NEST IN A HAYRICK.

ON July 17th, 1925, I found the nest of a Tree-Pipit (*Anthus trivialis*) in a very unusual site. The nest was situated on the steep side of the roof of an unthatched hayrick, seven feet from the ground, at Bourton-on-the-Water. I caught the bird on the nest to make sure of correct identification. The short and curved hind claw, as compared with the longer and nearly straight hind claw of the Meadow-Pipit, was noted. The nest contained three typical eggs. This is the first instance of an elevated site I have heard of.

A. G. TAYLER.

#### REDWING SINGING IN ENGLAND.

ON January 6th, 1926, in spring-like sunshine after wet and windy weather, my wife and son heard a Redwing (*Turdus musicus*) in good song at Leighton Park, Reading. From about two-thirds of the way up a fair-sized deodar, the bird sang for over five minutes. The phrases of the song were so varied and the pauses so few and short as to be reminiscent of a well-trained Harz canary.

C. I. EVANS.

[*Vide* previous records and comments, Vol. VII., pp. 322, 345.—EDS.]

#### WHITE-TAILED EAGLE IN ESSEX.

ON January 17th, 1926, under twenty-three degrees of frost, I drove seventy miles on the chance of seeing an "eagle," which, for the past three weeks, had been frequenting some woods in north Essex. By good fortune I had three splendid views of the bird as it was "driven" from one wood to another about fifty yards high over my head. In its size, general

outline and lazy, flapping flight it might have been a Golden Eagle, but as I could only see it from below and there was no sun it was very difficult to make out its colouring. Of this, however, I was certain, that its under parts were light yellowish and that its legs were bare and yellow. From below, no white was visible on the tail. I have little doubt but that the bird was an immature Sea-Eagle (*Haliaeetus albicilla*), though not since my boyhood days have I seen one of these rare birds on the wing. On several occasions it had been seen carrying a rabbit—on one occasion a hare—in its talons, and ground game was plentiful in the district.

SYDNEY H. LONG.

FOR nearly a month an immature White-tailed Eagle has been living in some large woods on a private estate in Essex, where it has been allowed to remain unmolested, and where it finds plenty of food in the shape of rabbits, which abound in these woods. It has been repeatedly seen by a number of people, and yesterday, February 1st, I saw it on four occasions myself. Approaching the wood, which is one of a chain of several, the keeper who conducted me soon drew my attention to the bird sailing over the tops of the trees, which in all these woods are principally small oaks with an undergrowth of hazel; it was a long way off, but had evidently already seen our approach. At this distance it was of course quite impossible to identify it. It flew over the trees and disappeared in the direction of the adjoining wood, where we remained hidden for some time, as the keeper said it generally returned to the first wood; however, seeing no signs of it, we proceeded to a third wood, and very soon saw it sitting on the top of one of the tallest oaks, and were able to get within three hundred yards of it without being seen. After a good look at it through field-glasses I showed myself, and as the bird sailed off the tree both legs for a moment were hanging straight down, and I could clearly see the legs bare of feathers, making me quite certain it was not a Golden Eagle, which species it had been first reported as being. Shortly afterwards, in the middle of the wood, it slowly flew over my head, not thirty feet above me, and gave me a most magnificent view, every feather being clearly visible. The keeper showed me a tree in the middle of one of the woods on which it often sat; the ground beneath was covered with whitewash, but no remains of game could be seen. It is possible that it eats its food on the ground, where it catches it. I am glad to say the keeper has strict orders to protect this splendid visitor, and not to allow anyone to molest it.

G. H. GURNEY.

## STOCK-DOVE IN CO. CORK.

MR. C. V. STONEY'S record of the Stock-Dove breeding in co. Donegal (*antea*, p. 235), induces me to add a note on its occurrence at Ummera, Timoleague, co. Cork; the bird was heard by me uttering its raucous coo on the mornings of July 15th and 16th, 1925, among some old timber near by. The only place where I had previously seen these birds in Ireland was flying about the high wooded cliffs over the lake at Glendalough, co. Wicklow, and that was in the early summer of 1889; this fact was mentioned to my friend Mr. Ussher, and the locality was noted in his *Birds of Ireland*, p. 224.

I may mention that I am familiar with the species as I have had over three years' daily acquaintance with its habits at Faringdon, Berks.

C. DONOVAN.

## TURTLE-DOVE WINTERING IN SHROPSHIRE.

FOR the last nine years or more a pair of Turtle-Doves (*Streptopelia t. turtur*) has nested in the grounds of Mrs. Steavenson's house at Bicton Heath, two miles west of Shrewsbury. This lady is fond of birds and feeds them all the year round. In the summer of 1916 the wild Turtle-Doves began to come down to the food put out for the other birds and fed along with them. As soon as the young could fly they too came down with their parents and fed with the others. All were quite tame. Next year they returned and at once came to be fed as before. This has continued every year since then up to the present time. Then came an unexpected sequel. One of the young reared in 1925, instead of departing with the others in autumn, remained behind, and has continued to come to the bird food regularly, right up to the present time. At first it was not very tame, but it survived the cold weather without any apparent inconvenience and is now perfectly tame. It roosts in the ivy on a tree close to the house, and comes down three times a day when called, and feeds with the pigeons. So far as can be seen the bird is quite normal and has no injury to account for its not having migrated.

H. E. FORREST.

## COMMON SANDPIPER IN BEDFORDSHIRE IN WINTER.

ON January 14th, 1926, when our ponds at Woburn were frozen over and snow lay thickly on the ground, I was surprised to see a Common Sandpiper (*Tringa hypoleucos*) on the bank of one of the ponds. It was restless and very soon flew off, though undisturbed by me.

M. BEDFORD.

## COMMON TERNS IN SURREY IN WINTER.

ON December 16th, 1925, I saw two Common Terns (*Sterna hirundo*) on Tooting Bec Common. At that time, after severe storms and extreme cold, Black-headed Gulls (*Larus r. ridibundus*) were very numerous all over London and were present in hundreds in such unusual places as Streatham, Norbury and South Norwood, and the Terns were among the Gulls, but seemed to be very exhausted, weary birds. They kept constantly to the ground, merely moving a few yards when passers-by came too close. I also saw a small flight of Terns, about a dozen, on the 17th, flying high over West Norwood. These also were, I am sure, Common Terns.

E. C. STUART BAKER.

## BLACK GUILLEMOT IN PEMBROKESHIRE.

IN *British Birds*, Vol. XVIII., p. 143, Miss C. M. Acland, referring to the doubtful status of the Black Guillemot (*Uria g. grylle*) in Wales, mentioned that she watched one at St. David's on June 18th, 1924.

It is therefore worth recording that Mr. Charles Oldham and I, while sailing off Porth Clais (St. David's) on July 16th, 1925, at 5.30 a.m., saw a Black Guillemot on the water about a mile from the shore. This bird afterwards flew past our boat apparently heading for Ramsey Island, where there is a large breeding colony of Auks. There were great numbers of Razorbills, Guillemots and Puffins on the water at the time.

BERTRAM LLOYD.

RED-CRESTED POCHARD IN MIDLOTHIAN.—With reference to the note under this heading on page 214, referring to a previous note on page 156, we much regret that a further error appears in this note, as we are now informed, and Mr. Serle agrees, that the Red-crested Pochard was first seen on *December* 21st, 1924, and not *October* 21st, as stated on page 214.

INCUBATION PERIOD OF THE REDWING.—Mr. D. G. Hunter states (*Scot. Nat.*, 1925, p. 158) that in a nest of *Turdus musicus* watched by him in Syd Varanger, north Norway, the last (fourth) egg of the clutch was laid on July 5th and three eggs hatched on July 17th and the remaining egg on the 18th, *i.e.*, twelve to thirteen days.

## REVIEWS.

*The Food of some British Wild Birds: a Study in Economic Ornithology.*

By Walter E. Collinge, D.Sc., M.Sc., etc. 2nd revised edition.

Published by the author. Parts 4-6. 6s. 3d. per part.

THESE parts of Dr. Collinge's work, of which we have already noticed previous ones (*antea*, p. 31), contain detailed discussions on the food of a number of species, most interesting and valuable both from an economic as well as from a scientific point of view. There are very few birds which Dr. Collinge condemns utterly, but like others he considers that the House-Sparrow requires very drastic reduction, while the Bullfinch should be destroyed in all fruit-growing districts, and even when it eats seeds of weeds he thinks it does harm by spreading these.

Of the Skylark Dr. Collinge considers that the damage it does sometimes to seed-corn and other crops is far outweighed by its destruction of injurious insects from April to September. The Great and Blue Tits are often condemned by fruit growers, and while acknowledging the harm they do to ripe fruit Dr. Collinge considers that they are nevertheless on the whole distinctly beneficial to fruit growers. The Blackcap, he states, may become a very undesirable pest in fruit districts if it is allowed to increase. Ornithologists will be grieved at this, but Dr. Collinge has found that even nestlings of this beautiful songster contained fruit.

The detailed account of the food of the Kingfisher, based on the examination of a number of pellets and some stomachs, shows that the bird eats trout but only to the extent of 7.28 per cent. of its total food, while to counterbalance this 15.66 per cent. consists of insects most of which are known to be injurious to trout fry and ova. For this reason Dr. Collinge considers the Kingfisher a very beneficial bird. It seems to us that this is somewhat like the cases of the Kestrel and Little Owl, the species being decidedly beneficial on the whole, but under certain conditions doing a considerable amount of damage.

One of Dr. Collinge's most interesting enquiries has been into the food of the Little Owl. Two investigations were made, the first consisting of the examination of 212 adults from nineteen different counties all round the year, and the second (at the instigation of Mr. M. Portal) of 98 adults from Hampshire in June and July, when young game-birds would be most plentiful. We are permitted to quote below the results of these two investigations set out side by side.

|                                    | First<br>Investiga-<br>tion. | Second<br>Investiga-<br>tion. | Average. |
|------------------------------------|------------------------------|-------------------------------|----------|
| Seeds of Weeds ... ..              | .55                          | .05                           | .30      |
| Miscellaneous Vegetable Matter ... | 5.96                         | 8.38                          | 7.17     |
| Slugs or Snails ... ..             | .02                          | .04                           | .03      |
| Injurious Insects ... ..           | 30.62                        | 17.30                         | 23.96    |
| Beneficial Insects ... ..          | .99                          | .56                           | .77      |
| Neutral ... ..                     | 17.63                        | 39.48                         | 28.56    |
| Voies and Mice ... ..              | 31.05                        | 7.71                          | 19.38    |
| Wild Birds ... ..                  | 4.45                         | 2.94                          | 3.70     |
| Game-birds ... ..                  | .51                          | 1.78                          | 1.14     |
| Earthworms ... ..                  | 7.83                         | 20.28                         | 14.05    |
| Miscellaneous Animal Matter ...    | .39                          | 1.48                          | .94      |

The birds other than game-birds noted as having been taken are chiefly Starling, House-Sparrow and Wood-Pigeon, while other species recorded are :—Greenfinch, Chaffinch, Skylark, Mistle-Thrush, Song-Thrush, Blackbird, Wren, Cuckoo and Lapwing, these results being from the examination of stomachs, pellets and "larders." To these we might add Pipit (probably Meadow) remains of which we have twice found in stomachs of this species.

We recommend all ornithologists to study Dr. Collinge's work.

H. F. W.

*The Secrets of the Eagle and of other Rare Birds.* By H. A. Gilbert and Arthur Brook. (Arrowsmith.) Illustrated. 10s.

IN this book Mr. Gilbert describes the adventures of Mr. Brook and himself in reaching and photographing a number of interesting British birds at their nests. Among these are the Golden Eagle, which has pride of place and space, the Black-throated Diver, Black Guillemot, Arctic Skua and Crossbill. Mr. Brook's photographs are very fine, and we admire especially the one of the Eagle flying into the nest with a Grouse, that of the two Black-throated Divers with their downy young, the Black Guillemot and the Swifts.

The title of the book is perhaps unfortunate, as the authors have evidently not usually spent enough time in observation to be able to reveal many "secrets" of the birds depicted. Except in the account of the Wood-Lark, where they are evidently at home with the bird, there is always the feeling that the authors have rushed from place to place to photograph and make some observations on as many species as possible.

They have, however, produced a very readable book, which, with the really beautiful photographs, will give the reader a good first idea of the appearance and habits of a number of our rarer breeding birds.

## LETTERS.

### STATUS OF THE GOLDEN EAGLE IN IRELAND.

*To the Editors of BRITISH BIRDS.*

SIRS,—The Rev. F. C. R. Jourdain's note in *British Birds* (*antea*, p. 211) will be read with great interest by those ornithologists who would wish to see the Golden Eagle (*Aquila ch. chrysaëtus*) re-establish itself in Ireland, where it was once a familiar object. There is some hope that it may yet do so. Although I cannot speak of the counties of Mayo and Galway from personal observation, yet I have little doubt, from information in my possession, that at least one pair of Eagles has reoccupied during the last two years a former haunt in the west, and it is possible that these are not the sole representatives of the species in Connaught.

With regard to Co. Donegal, I can confidently assert that no Eagles have bred since 1910. Their last eyries were in the Slieve League and Glenveigh Mountains. In the former a pair appeared in 1912, but one disappeared the following spring, and the survivor was shot in 1915. At Glenveigh, the last pair was seen in 1910. One of these was shot the following year, and since that date a solitary straggler has appeared intermittently, and I have records of its appearance in 1924, and 1925. Probably this is the bird seen by Mr. French, but if so,

it has not yet succeeded in finding a mate. Owing to the restrictions in the use of firearms, and the almost complete cessation of game preserving in those counties which they frequented of old, Golden Eagles would certainly be more free from molestation now than at any time during the past fifty years. C. V. STONEY.

### LIFTING POWER OF THE GOLDEN EAGLE.

*To the Editors of BRITISH BIRDS.*

SIRS,—I hope Mr. MacDonald will give us further particulars about the small lamb which he found in an Eagle's nest (*antea*, p. 219) and tell us whether it was stillborn and what was its weight. During the evening of June 14th, 1925, I observed that a hen Golden Eagle had considerable difficulty in lifting a blue hare, weighing, say, six or seven pounds, from the ground, although, once the bird was in flight, she carried her prey quite easily to the nest, where my friend, Arthur Brook, photographed her arrival. In the course of two tours in the Highlands we have never been able to find any direct evidence that the Golden Eagle steals living lambs, although it is generally accepted that it does do so. The fact that the Eagle seemed with great difficulty to lift so small an animal as a blue hare seemed to us very significant.

Mr. Witherby has been good enough to give me two references which do not altogether agree with our conclusions.

In the first (*B.B.*, Vol. XV., p. 24) it is stated that a lamb weighing 19 lbs. was carried by an Eagle for two miles and a half. This story was told by an anonymous Scotch soldier to a resident in Farnham during the war. I, personally, cannot accept such evidence.

In the second, a letter from Lt.-Col. H. Delmé-Radcliffe (*B.B.*, Vol. XV., p. 217), the writer describes how in the Himalayas he saw a Golden Eagle carry a large marmot for half a mile, flying low but "fairly easily." The Eagle was shot and it was found that the marmot weighed slightly more than the Eagle, the latter being about "10 lbs. and the marmot about 1 lb. more."

Lastly, a very interesting letter appeared in the *Field* (August 6th, 1925, p. 260) from Mr. C. H. Donald, who states that he had seen a good deal of the Himalayan form of the Golden Eagle (*A. chrysaëtus daphanea*) and had kept four as pets at various times, so that he had been able to see and test their strength. With regard to their carrying powers he goes on to say:—

"Of course, a great deal depends on the nature of the ground and the position of the wind. Given a steep hillside and a fairly strong wind blowing up, to give him a good start, I don't think an Eagle will have much difficulty in carrying double its own weight and something to spare, but on the flat it would be about as much as he can do to raise his own weight off the ground.

The Golden Eagle, in the Himalayas, varies tremendously in size and weight. I found a record of an old female I shot in Kashmir in 1906 as weighing 16 lb., and one of my own pets, a huge bird, was very nearly 14 lb.

You will see that Hume, in *Rough Notes*, records having taken a fish from a Pallas's Fish-Eagle, which the latter had carried right across the river, weighing 13 lb. 2 oz., and I do not think a Pallas's Fish-Eagle would ever exceed 10 lb. in weight, if that."

Since the above has been put into type I have received the following interesting evidence of the Golden Eagle taking living lambs.

George McKenzie of Grantown-on-Spey, writes, on February 8th, 1926, as follows :—" While attending my father's sheep on the farm of Dirdhu, on May 1st, 1910, I came across a ridge of the hill and saw a Golden Eagle attacking a young lamb about fifty yards below me. The Eagle rose with the lamb grasped in its talons, but when I shouted and threw my stick, it dropped the lamb which I found with a deep gash in its throat and some scars on its back. I took it home and it recovered but was weak from loss of blood for some time.

Early in the morning on the Thursday following I disturbed the Eagle, which rose about eighty yards on the far side of the burn from me. On the near side of the burn and at least 150 yards from where the Eagle rose, I found a ewe which I knew had given birth to a lamb that morning. The ewe was bleating and running about looking for her lamb but it was not to be seen, although I found the very spot where it was dropped. I then remembered about the Eagle, and after what I had seen the Sunday before I suspected it might have taken it. I went across the burn to where I saw it rise and there found the lamb. It was dead but fully matured, and as far as I could judge had been born alive as it seemed to have been well licked by its mother all over, which would have been impossible if it had been born dead."

This evidence is confirmed by John G. McKenzie, brother of the above, from whom I hope to receive details of other cases later.

Alex Kinnaird of Boat of Garten writes, on February 15th, 1926, as follows :—" In the year 1898 I was a gamekeeper in Aberdeenshire, and about the last days of April I met the shepherd of a farm on my beat. While I was talking to him an Eagle came in sight on the slope of the hill. We watched it coming soaring over the sheep and lambs, and about five hundred yards where we were standing it darted down on a lamb which had been born about three-quarters of an hour before that. It carried it straight away. We followed on but saw no sign of the Eagle or lamb. The shepherd said he has lost them in the same way every year."

H. A. GILBERT.

BISHOPSTONE, HEREFORD. February 4th, 1926.

[In *Field Observations on British Birds* the late F. Menteith Ogilvie, who had very considerable experience, has a good deal to say about the destruction of lambs by Golden Eagles, though he gives few details. He states (p. 210) that "an Eagle that nests on a sheep-farm and starts on lambs, will go on taking them until they are grown too big for him to carry," and even says that the Eagle will pick them up at the rate of two and three a day. In support of the latter statement he describes how he found in the immediate vicinity of an eyrie (in which the hen was incubating) three freshly killed lambs besides a blue hare. He does not, however, state the age or weight of the lambs.—Eds.]

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NORMAN F. TICEHURST, O.B.E., M.A., F.R.C.S., M.B.O.U.

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## ON SWAN-MARKS.

BY

N. F. TICEHURST, O.B.E., M.A., F.R.C.S., ENG.

(PART I.)

THEIR NECESSITY.—Some method of distinguishing the stock of one owner from that of another, especially in districts where communal grazing was practised, must have been requisite from very early times. The custom therefore of branding, nicking the ear or placing some such recognition mark upon live-stock probably goes back to the beginnings of history. We know that horses were thus marked by the ancient Greeks, just as cattle and horses are branded in Australia, America and elsewhere to-day.\* The great variety of marks used to indicate the ownership of sheep in this country is a familiar example that will occur to everybody.

If we imagine, as many have done, that the Mute Swan (*Cygnus olor*) was an introduced species, it would have been established, in the first instance, in moats and other private waters on the manors of wealthy proprietors, who alone would be able to afford the extravagance of importing it. We may be sure that as their stock increased these owners would take very good care by pinioning that the birds did not stray, and would place some mark upon them, whereby, if they did stray, they could be recognized and reclaimed. If, on the other hand, we believe the Swan to have been an indigenous species, there must have been a time when the process of reducing it to a condition of semi-domesticity began. The first step no doubt would have been the catching up of half-grown young birds, pinioning them, keeping them for a time shut up near the captor's house and eventually turning them out to breed on some neighbouring river or mere. These first steps need not have been, and quite likely were not, taken by people of the same exalted class, who would have been the early owners of introduced Swans, and the habits of the birds requiring that they should lead at least a semi-wild life, so soon as their numbers increased beyond a certain limit a condition of things very analogous to communal grazing would be created. The necessity would at once arise for some mark to be placed upon the birds, whereby owners could recognize their own

\* *Vide* Thompson, *History of Boston*, p. 642, for illustrations of cattle marks used in the Fens in 1548.

property, not only to avoid losing the old birds, but in order that they might claim the young, as well as to trace those that had strayed or been stolen, which seems to have been a not infrequent occurrence. In one or other of these ways therefore the practice of marking Swans had its beginnings.

**THEIR NATURE.**—When one speaks of Swan-marks one usually refers to the nicks or other designs placed upon the upper mandibles of Swans to denote to whom they belonged. But these, although the most universally used marks, were not the only ones. They were occasionally supplemented by notches cut in one or both edges of the lower mandible, by some simple design cut in the side of the tarsus or the body of a web, by one or more slits cut in the edges of the webs, or by the removal of one or both hind toes or one or more claws. On the Arun in Sussex the side on which the pinioning was done seems to have constituted part of the mark.

In Yorkshire every owner had his foot-mark as well as a beak-mark, and all young birds were marked with the foot-mark alone at the Midsummer upping, while the beak-mark was added at Michaelmas on those that were to be kept for stock. About two dozen foot-marks are recorded for the great level of the Fens, several owners on the Arun possessed them, the Earls of Rutland used one on the Trent, and one was reserved for putting on Thames Swans that became forfeit to the Crown, but elsewhere there is no evidence of their use.

Lower mandible marks seem to have been entirely confined to the Fens at a comparatively early period. Towards the end of the fifteenth century a considerable proportion of Fen marks had them. Their use must have been a very questionable convenience, seeing that in the Swan the lower mandible shuts into the upper and its edges are quite hidden when the bill is closed. In any case their use rapidly died out and under a dozen are on record for Elizabethan times.

**THEIR MODE OF RECORD.**—If not before, at any rate very soon after, the passing of the statute of 1483, when a more strict supervision of Swan-keeping was instituted, all the marks used in each area, for which a deputy Swan-master was responsible, were collected and entered with their owners' names in a book or roll that was kept in his custody. In speaking of these, whether books or actual rolls, it is convenient to use the word roll for all.

There is evidence that Swans were kept and marks used in Kent, Sussex, Hampshire, Dorset, Somerset, Hertfordshire, Nottingham, Stafford, Warwick and Yorkshire, but I have



never heard of any rolls of marks appertaining to these counties and only very few odd marks used in them have come to light.

Such rolls as I have been able to examine are divisible territorially into three groups. These undoubtedly contained the greater part of the Swan-owners in England in the fifteenth, sixteenth and seventeenth centuries, and each group was presided over by its deputy Swan-master. The first and largest group I have termed the Fenland area. It included the counties of Cambridge, Huntingdon, Northampton, Lincoln, west Norfolk and parts of Leicester, Rutland and Bedford. The second, the Broadland area, included east Norfolk and the whole of Suffolk. The third, the Thames area, included Middlesex, Surrey, Buckinghamshire, Berkshire, Oxfordshire and parts of Hampshire, Wiltshire and Gloucester.

Besides other MS. material of coeval date, this paper is based on a study of thirty-one of these rolls, fifteen Fenland, ten Broadland, two mixed Fenland and Broadland and four Thames. Swan-marks are depicted on these rolls in two different ways, but with much variety of detail. Usually a conventional outline of the upper mandible in plan is drawn, either vertically or horizontally, and the nail at the tip and the knob at the base are generally indicated. Occasionally the head and eyes are drawn also. In a good many instances the whole head is drawn in profile, but in these cases the bill is always drawn in plan, so that the whole mark can be exhibited in its right position. What therefore appears in the drawing to be an outline of the culmen is actually the opposite margin of the bill.\* The fact that this is so is generally indicated by the position of the nail.

In both types the outline and the marks are drawn in black, while sometimes the bill is filled in with red paint.

Where lower mandible marks are recorded they are either depicted as triangular notches projecting outwards from the lateral margins, or a description of them is written across the bill, *e.g.*, Edmund Thompson of Sutton St. Mary, Lincs, had "a tick att the bills end on the farr side on the nether chappe,"

\* Whoever was responsible for drawing the marks of the Corporation and the Bishop of Norwich in Yarrell (*B.B.*, IV., p. 339) had not appreciated this. They were evidently copied from one of these profile rolls (most Broadland rolls are of this type) and the artist, thinking that only half of the marks were shown, has, in transferring them to his outlines which are in plan, doubled them. What should therefore have been depicted as nicks down the far side of the bill have become transformed into diamonds down the centre!



and John Woode of Fulbourne, Cambs., had "tow tickes on the nether beake on the nere side."

Foot-marks were occasionally drawn also, but were generally written in the same way, *e.g.*, part of the mark of Tattershall College, Lincs, was "A penny crosse on the legge," and Thomas Gray of Wisbech, Cambs., had "both the out webbs slyt."

The question is sometimes asked, how many Swan-marks were there? It is really an impossible one to answer. As will be seen later on the same mark underwent variations from time to time, while old ones died out and new ones were created in continuous succession. It would no doubt be possible to arrive at a rough figure by a very laborious process of comparison, but it would be impossible to arrive at any conclusion as to how many were actually in use at a given time. Just by way of illustration, Brit. Mus. Add. MS. 6301, which is a representative Fenland roll of early James I. period, contains 802 different marks, but whether they were all in use at that time is quite doubtful. The Record Office roll records 184 different marks, which appear to have belonged to owners almost entirely resident in the Hundred of Holland, S. Lincs. It is about 100-130 years anterior in date to MS. 6301, and but a very small proportion of the marks are to be found in both. The Chetham Library roll contains 469 different marks of early Elizabethan date used on the Thames and its tributaries, the Loseley roll has thirty late Elizabethan marks for Surrey, only one or two of which occur on the Chetham roll, while there must have been 130 at least belonging to the Broadland area. At one time or another therefore there must have been considerably more than 1,500 marks in use in these parts of England alone.

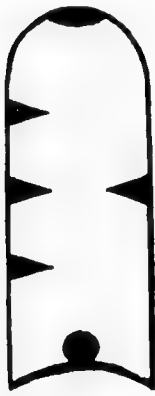
THEIR DERIVATION.—There can be no doubt that all landed proprietors, whether lords of the manor, heads of religious foundations or other, in mediæval times had each their own mark or marks, which they used to indicate the ownership of their stock. There is also considerable evidence, though but little of it has ever been collected, that the same custom prevailed throughout those of yeoman, and even inferior, rank. Each man had his family mark which was placed upon his house, his cattle and horses, his sheep, goats and pigs, and even upon his ducks and geese.\* The same mark also he

\* In the Hundred Court of Seaford, Sussex, 1583-4, the Jury presented "John Comber for markyng of thre duckes of Edward Warwikes and two ducks of Symon Brighte with his owne marke and cutting owt of theire markes." (*Sussex Arch. Coll.*, VII., p. 99); *vide* also *Archæologia*, XXVII., p. 386.

used to append to deeds and other formal documents in place of signing his name, which in most cases he was incapable of doing.

EXAMPLES OF SIMPLE MARKS.

1. The Bishop of Norwich. 2. Lord Morley. 3. Stockton Hall.  
4. Lord Fitzwalter. 5. Claxton Hall. 6. Smallborough Hall.



1.



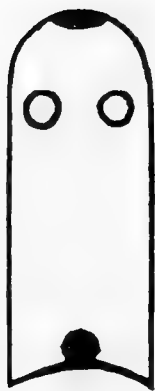
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3.



4.



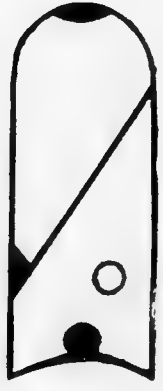
5.



6.



7.



8.

7. Sir Miles Stapleton of Ingham, d. 1466. 8. The Prior of Bromholm.  
(These are all Broadland marks, 1 to 6 from Brit. Mus. Add. MS. 4977,  
7 and 8 from Add. MS. 23732.)

Lord Morley's mark (2) is particularly interesting, as it is unique, having been used by him both on East Anglian waters and on the Thames. Other owners having Swans in different areas all had a different mark for each.

While no doubt the earliest Swan-marks consisted of merely one or more notches or holes, cut or punched in the bill or through one or more webs of the toes, many of these early

manorial and yeoman's marks would be nothing more elaborate. What is more likely then that many of the earliest Swan-marks should consist merely of an extension of use of marks already existing to another species? So few of these marks have hitherto been brought to light, that though it is possible to say that there is a striking similarity between some of them and some recorded Swan-marks, it has not yet been possible to establish any direct association between them. If any such connection should ever be proved it is most likely to be found in the case of certain marks used in the Broadland area. Many of these consist only of different numbers of triangular notches, variously arranged on one or both sides of the upper mandible. Such simple marks are comparatively rarely found in other parts of England and strongly suggest a more ancient origin.

Anyone desirous of designing for himself a mark, whether for Swans or other stock, after the permutations and combinations of simple notches have been exhausted, would probably think first of a letter or combination of letters, such as his own initials. A good many such instances are to be found amongst Swan-marks, some simple, others more or less fantastically arranged or in combination with other devices. The majority are however of somewhat late origin. In some cases, probably of more ancient date, the connection has been lost through change of ownership, the mark as recorded in rolls now extant being under the name of a later proprietor.

A second possible method of composing a Swan-mark that would occur to most people, especially in the times with which we are dealing, would be to utilize some charge from their armorial bearings. A fair number of Swan-marks are of a quasi-heraldic character, but no more than one or two instances have hitherto been cited by antiquarian writers in which any connection can be demonstrated between the mark and the owner's arms, while the extreme rarity of any such relationship has several times been commented upon by them. Most however have been writing on a single roll, and it must be remembered that changes of ownership were frequent, so that the clue to the actual origin of a given mark of heraldic character might easily be absent. I have so far been able to establish a definite connection between the mark and the owner's coat-of-arms in some two dozen cases; there are probably a good many more awaiting discovery, but it would seem that this mode of origin is really a comparatively rare one.

## EXAMPLES OF MARKS DERIVED FROM THEIR OWNER'S NAMES.

9. Sir Edward, first Baron North, of Kirtling, Cambs., d. 1564.
10. Lewis Mordaunt, third Baron Mordaunt, of Turvey, Beds, and Drayton, Northants., d. 1597.
11. Sir John Hamby of Tathwell, Lincs, d. 1675.
12. William Prentice of Wiggshall St. Mary Magdalen, Norfolk, *viv.* 1523.



9.



10.



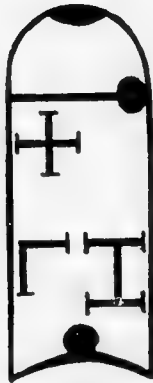
11.



12.



13.



14.



15.

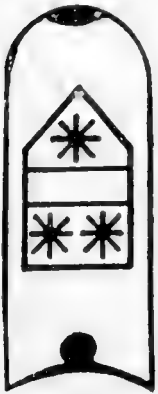


16.

13. John Vaughan of Ockham, Surrey, *viv.* 1566.
  14. Sir Henry Lee of Ditchley, Oxon, Ranger of Woodstock, d. 1610.
  15. Thomas Orpwood, Mayor of Abingdon, Berks., 1575.
  16. Sir Lawrence Tanfield, of Burford Priory and Great Tew, Oxon, Chief Baron of the Exchequer and Deputy Swan-Master for the Thames, d. 1625.
- (9 to 11 are Fenland marks from Add. MS. 6301; 12 is a Fenland mark from Add. MS. 4977; 13 is a Surrey mark from the Loseley roll; 14 to 16 are Thames marks from the Chetham Library roll.)

## EXAMPLES OF MARKS DERIVED FROM THEIR OWNER'S NAMES.

17. Henry Everard of Walpole in Marshland, Norfolk. This branch of the family bore for their arms, gules, on a fesse between three estoilles argent, a mullet sable.
18. Geoffrey Paynell of Fishtoft, Lincs, *viv.* 1520, who bore gules, two chevrons argent.
19. Robert Dudley, Earl of Leicester, d. 1588. Taken from his badge of the ragged staff.
20. Sir Robert Bevell of Chesterton, Hunts, K.B. 1603, who bore gules, a chevron or, between three bezants.



17.



18.



19.



20.



21.



22.



23.



24.

21. John Reppes of West Walton in Marshland, Norfolk, who bore ermine, three chevronels sable, a crescent for difference.
22. Sir Drew Drewry of Catton, Norfolk.
23. Sir Robert Drewry of Rougham, Norfolk, knighted 1603.
- These form an interesting pair, the Drury arms were, argent, an annulet gules, on a chief vert a cross tau, between two mullets argent, pierced gules.
24. Andrew Halse of Sutton Courtenay, Berks, who bore argent, two piles sable.

(17 is from Add. MS. 6302; 21 and 22 from Add. MS. 4977; 23 from Add. MS. 40072; 18 from the Record Office roll; 19 from the Wisbech Museum roll; 20 from Mr. Henry Cooper's roll; 24 from the Chetham Library roll.)

On the other hand marks composed of simple designs of an heraldic character, either single, multiple or in combination, form a large group. It seems convenient to adopt an heraldic nomenclature for these as being short and easily understood. Amongst them may be mentioned the shield, which is rare and usually occurs carrying a device, the whole forming a true heraldic mark. The fesse, bar, chevron, bend, annulet and roundel are all very common, crosses occur in great variety, while the crescent, trefoil, knot, fylfot, buckle, staple and lozenge are quite rare. It is clear that with such a choice of easily formed devices, especially when combined, as is often the case, with nicks, triangles, half-hoops and squares, it would be possible to compose an endless variety of easily distinguishable marks. The majority of these designs appear to us at present to be quite arbitrary, though many may have had a meaning at the time of their inception. Marks falling into this group are abundant amongst those used in the Thames area.

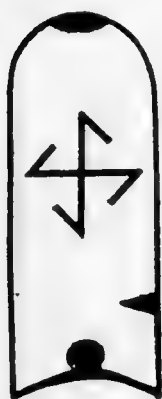
Another possible source of origin lies in the analogous category of merchants' marks. Quite a number of sixteenth century Swan-owners were wealthy merchants of the Staple of Calais, and it is, I think, highly probable that if their marks could be unearthed, the Swan-marks of some of them would be found to be wholly or in part identical. The few I have hitherto seen, as also the mediæval masons' marks, bear a striking analogy to some Swan-marks, though in the latter case any connection is much less probable, while both may be merely instances of development along parallel lines (*cf. Archæologia*, XXXVII., p. 383 and *Trans. Norf. Arch. Soc.* III. and IV.).

Other marks evidently had their origin in a symbolic representation of the calling of their owners. Thus many of the monastic houses and their heads took an Abbot's or a Prior's staff for their mark, sometimes doubled, as in the case of Swineshead Abbey (Yarrell, *B.B.*, IV., p. 332) or combined with other devices, such as bars, annulets, nicks, etc., of which there are numerous instances in rolls of the Thames area. A particularly interesting example in this category is furnished by the mark of the Abbey of Crowland. It may be remembered that this Abbey was founded to the memory of St. Guthlac, who, the legend states, retired to an island in the Fens, where he was nightly plagued by a number of devils, from whose importunities he was ultimately delivered by means of a scourge presented to him in a vision by St. Bartholomew. Bearing this in mind, the monks of Crowland

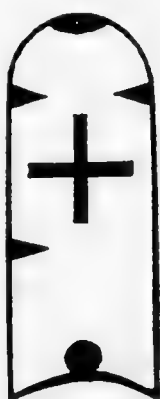
adopted as their Swan-mark a three-thonged scourge, the drawing of which in the Swan-rolls is absolutely identical with

EXAMPLES OF MARKS OF QUASI-HERALDIC CHARACTER.

25. Randoll Bird of Pinchbeck, Lincs, b. 1583.
26. Edward Hall of Gretford, Lincs, 1540-1592.
27. Thomas Hewar of Oxborough, Norfolk.
28. Thomas Cony of Kirton in Holland, Lincs, d. 1584.



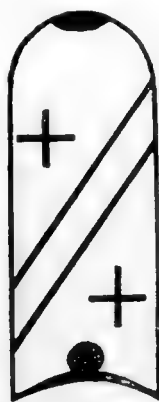
25.



26.



27.



28.



29.



30.



31.



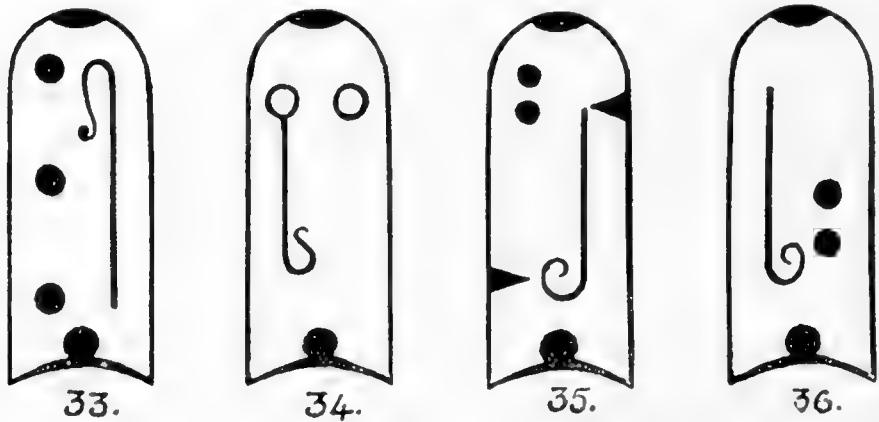
32.

29. John More of Haddon, Oxon.
30. Nicholas Nicholas, Alderman of Reading, 1546.
31. Richard Bridges of Shefford, Berks, d. 1558.
32. Christopher Litecct of Ruscombe, Berks, d. 1554.

(25 to 28 are Fenland marks from Add. MS. 6301; 29-32 are Thames marks from the Chetham Library roll.)

that of the one being handed by St. Bartholomew to St. Guthlac in a twelfth century illuminated MS. of his life in the

British Museum. The Swan-mark, moreover, was always known under the name of "the skorge" (53 *infra*). Yarrell (*l.c.*, p. 333) referring to his figure of the mark of Lord Buckhurst from the Loseley roll states that its being composed of two keys had reference to his office of Chamberlain of the Household. This may have been so, though we have no information as to whether the date of origin of the mark was subsequent to that of his appointment to that office. The use of one or two keys alone or in combination with other objects was not a very rare device.



EXAMPLES OF MARKS DERIVED FROM THEIR OWNERS' CALLING.

33. The Abbot of Dereham, W. Norfolk.

34. The Abbot of Langley, E. Norfolk.

35. The Abbot of Chertsey, Surrey.

36. The Abbot of Medmenham, Bucks.

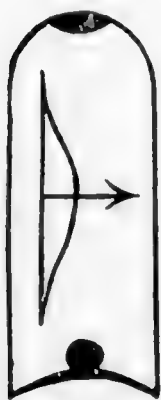
(33 is a Fenland mark from Add. MS. 6302; 34 a Broadland mark from Add. MS. 23732; 35 and 36 Thames marks from the Chetham Library roll.)

A large number of marks, particularly amongst the Fenland ones, consist of designs derived from familiar objects used in the house, in agriculture, in trade or sport, and may or may not bear any allusion to the avocation of their first proprietors. These consist, besides keys already mentioned, of such things as forks, knives, pot-hooks, bows, arrows, a cross-bow, a pike, a stirrup, spurs, a hunting horn, a boat, a rudder, anchors, punt-poles, fish-spears, ladders, dice, swords, spades, shears, carpenters' squares, hammers, baker's peels, etc., etc. These occur singly or in pairs or in combination with one another, either parallel or crossed, so that a large number of somewhat elaborate, but easily distinguishable, designs resulted.



EXAMPLES OF MARKS DESIGNED FROM HOUSEHOLD AND OTHER  
OBJECTS.

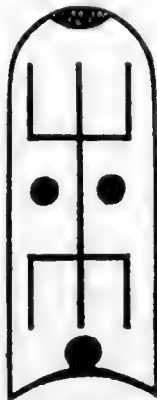
37. Richard Cecil of Burghley, Northants, d. 1553, Bailiff of Whittlesea and Deputy Swan-Master.  
38. Clement Hunston of Ruskington, Lincs, d. 1582.  
39. Francis Quarles of Ufford, Northants, d. 1570.  
40. Sir Humphrey Stafford of Blatherwyke, Northants, *vis.* 1570.



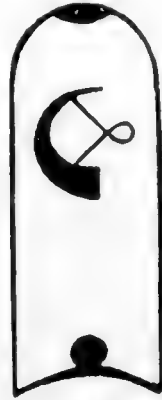
37.



38.



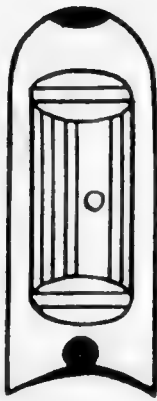
39.



40.



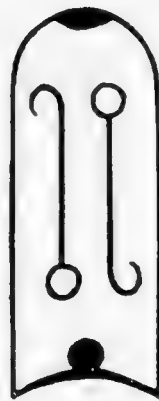
41.



42.



43.



44.

41. The Parson of Fleet, S. Lincs.  
42. Gregory Pratt of Ryston, W. Norfolk, d. 1609.  
43. Thomas Gray of Wisbech, Cambs., d. 1593.  
44. Sir James Harington of Ridlington, Rutland, *vis.* 1578.  
(The above are all Fenland marks, 37 to 40 from Add. MS. 6301 ;  
41 and 42 from Add. MS. 4977 ; 43 from Add. MS. 6302 ;  
44 from Bodl. MS., Rawlinson B. 277.)

(To be continued.)

# ON THE DISTRIBUTION OF THE SOUTHERN AND NORTHERN GUILLEMOTS IN GREAT BRITAIN.

BY

H. F. WITHERBY.

IN *British Birds*, Vol. XVI., pp. 323-4, I published some notes on the Common Guillemot and described the birds breeding in England, Wales and Ireland and Ailsa Craig as *Uria aalge albionis*, paler and on the whole rather smaller than the typical form *Uria aalge aalge*. At the time, owing to lack of specimens from breeding localities, I could not define the exact breeding ranges of the two forms in Britain, nor indeed say for certain whether the dark northern form bred in this country or not.

Since that date Miss L. J. Rintoul has taken a great deal of trouble to obtain specimens from various breeding localities in Scotland and has most generously forwarded them to me for comparison. I am also much indebted to the Rev. J. M. McWilliam, who has been good enough to procure some specimens for me from West Scotland.

As a result of the interest taken by these two ornithologists in the subject I am able to say definitely that the dark northern form *Uria aalge aalge* breeds in the Shetlands (Out Skerries), Outer Hebrides (Barra) and certain Inner Hebrides (Treshnish Islands and Canna).

Two specimens from the Isle of May (Firth of Forth) are as dark as typical Iceland birds, while a third as well as two from St. Abb's Head are not so dark, yet they are all darker than specimens of *Uria a. albionis* from Yorkshire. Similar intermediate examples from Gotland (Sweden) and Heligoland are considered by some ornithologists to be worthy of subspecific rank. I agree that the fact that they are intermediate is very important and names are only given to accentuate and define such facts, but the birds from these localities seem to me too variable to separate as a distinct race, and, as they are on the whole more like the dark northern form *U. a. aalge*; I prefer to call them by that name.

I have not yet been able to examine specimens from the southern Inner Hebrides nor from the Farne Isles, and the most northern breeding places of the southern form (*Uria a. albionis*), so far as I have yet been able to ascertain, are Ailsa Craig (N. Lat. 55° 15') on the west and Flamborough Head (N. Lat. 54° 8') on the east.

## THE "BRITISH BIRDS" MARKING SCHEME.\*

PROGRESS FOR 1925

BY

H. F. WITHERBY.

THE BRITISH BIRDS ringers in 1925 again beat all their previous records in the number of birds ringed, and the three last years totalling together nearly fifty thousand make a remarkable record of industry and perseverance. The following are the totals :---

## NUMBER OF BIRDS RINGED.

| In 1925     |    | ...    | ...     | 18,233  |        |
|-------------|----|--------|---------|---------|--------|
| In 1909     | .. | 2,171  | In 1917 | ..      | 6,926  |
| „ 1910      | .. | 7,910  | „ 1918  | ..      | 5,937  |
| „ 1911      | .. | 10,416 | „ 1919  | ..      | 3,578  |
| „ 1912      | .. | 11,483 | „ 1920  | ..      | 5,276  |
| „ 1913      | .. | 14,843 | „ 1921  | ..      | 8,997  |
| „ 1914      | .. | 13,024 | „ 1922  | ..      | 9,289  |
| „ 1915      | .. | 7,767  | „ 1923  | ..      | 12,866 |
| „ 1916      | .. | 7,107  | „ 1924  | ..      | 18,189 |
| Grand Total |    | ..     | ..      | 164,012 |        |

This year over eighty readers took part in the scheme and of these Dr. H. J. Moon not only ringed far more birds than anyone else, but also beat all his own previous records with a total of over three thousand two hundred. These were made up of forty-two species, many Passeres, the largest numbers being Song-Thrush (863), Blackbird (563), Chaffinch (209), Robin (179), Wren (160), Willow-Warbler (150), Starling (130), Greenfinch (122) and Redstart (109). Mr. Mayall, who again this year comes second with a total of over nineteen

\* For previous Reports see Vol. III., pp. 179-182, for 1909; Vol. IV., pp. 204-207, for 1910; Vol. V., pp. 158-162, for 1911; Vol. VI., pp. 177-183, for 1912; Vol. VII., pp. 190-195, for 1913; Vol. VIII., pp. 161-168, for 1914; Vol. IX., pp. 222-229, for 1915; Vol. X., pp. 150-156, for 1916; Vol. XI., pp. 272-276, for 1917; Vol. XIII., pp. 96-100, for 1918; Vol. XIII., pp. 237-240, for 1919; Vol. XIV., pp. 203-207, for 1920; Vol. XV., pp. 232-238, for 1921; Vol. XVI., pp. 277-281, for 1922; Vol. XVII., pp. 231-235, for 1923; Vol. XVIII., pp. 260-265, for 1924.

hundred of thirty-three species, has also worked chiefly on Passeres. His largest numbers are Song-Thrush (368), House-Martin (308), Blackbird (207), Linnet (186), Swallow (149) and Chaffinch (136). Lord Scone, who comes next with an excellent total of over twelve hundred, has ringed thirty-six species, of which the largest numbers are Song-Thrush (350) and Common Tern (182), while Woodcock (32) and Wood-Pigeon (29) may be mentioned among others. Mr. A. W. Boyd has ringed over a thousand of no less than forty-seven species, and of these may be mentioned Mallard (53), Turtle Dove (11) and Yellow Wagtail (11). Mr. R. H. Brown, who comes next with nearly eight hundred, has ringed forty-six species, amongst which I note Rook (118), Lapwing (100), Heron (23) and Carrion-Crow (22). As will be seen by the list a number of other ringers are to be congratulated on having reached large figures in 1925.

Regarding the species ringed I am glad to see an increase in the numbers ringed of such interesting species as Cuckoo, Merlin, Kestrel and Teal, while it may be noted that a record number of Lapwing were ringed, and the large number of Sandwich Tern might lead to our gaining more exact knowledge of the movements of these birds in the breeding-season.

The percentage of recoveries has not varied greatly one way or the other. A number of interesting recoveries have already been published and among these I may single out the following: some valuable records of Wheatears by Mr. J. F. Thomas (*antea*, p. 98); a Willow-Warbler (*Phylloscopus trochilus*) ringed as a young bird for Mr. J. Bartholomew in June, 1921, and reported from Portugal in October, 1924 (p. 14); a Mallard (*Anas platyrhynchos*) ringed as an adult by Mr. M. Portal in Wigtownshire in February, 1914, and reported in Finland in August, 1920, or 1921 (p. 16); two Gannets (*Sula bassana*) ringed by Mr. D. Macdonald on Ailsa Craig as young birds being found one year and two years afterwards in the North Sea (p. 172); and the Sandwich Tern (*Sterna sandvicensis*) ringed at the Farne Islands by Miss N. H. Greg as a nestling in July, 1919, which was reported in South Africa in August, 1925, by Mr. E. Leonard Gill.

There are also some particularly interesting recoveries not yet published and among them I may mention:—a Whinchat (*Saxicola rubetra*) ringed by Mr. R. H. Brown as a nestling in Cumberland in July, 1925, and reported by Mr. W. C. Tait from Portugal in October; a Kestrel (*Falco tinnunculus*) ringed by Mr. T. K. Craven as a young bird in Dumfriesshire in July, 1925, and reported in Sussex in October; a Heron (*Ardea*

*cinerea*) ringed as a nestling by Mr. J. R. B. Masefield in May, 1910 (the second year of our scheme), in Staffordshire and reported from the same county by Mr. R. E. Knowles in February, 1926, this being the oldest ringed bird so far recorded under this scheme; a remarkable record of a Wood-Pigeon (*Columba palumbus*) ringed by Mr. P. K. Chance as a nestling in Hampshire in August, 1925, and reported in Yorkshire in January, 1926; several Song-Thrushes (*Turdus ph. clarkei*) ringed in England and Scotland being found, one in France and others in Ireland in December, 1925, may perhaps have been due to hard weather; a Guillemot (*Uria aalge*) ringed off Sutherlandshire by Mr. A. W. Boyd as an adult in June, 1923, and reported from Oslö (Christiania) Fjord, Norway, in December, 1925; and finally a Cuckoo (*Cuculus canorus*) ringed by Mr. T. K. Craven in Ayrshire as a young bird on July 7th, 1925, has been reported as having been found in Thuringia, Germany, on August 2nd, 1925 (full details not yet ascertained), which, taken in conjunction with one reported from Italy (Vol. XVI., p. 302), points to an usually eastern migration of this bird. Full details of these and other records will be published later.

#### NUMBER OF BIRDS "RINGED."

DR. H. J. MOON (3237), Mr. A. Mayall (1907), Lord Scone (1218), Messrs. A. W. Boyd (1024), R. H. Brown (775), P. E. A. Morshead (686), H. W. Robinson (567), Mr. W. P. G. and Mrs. L. E. Taylor (563), Mr. J. Bartholomew (553), Misses F. K. Staunton and C. Wingfield (533), Mr. and Mrs. R. O. Blyth (511), Messrs. P. K. Chance (474), H. G. Watson (461), Mrs. T. E. Hodgkin (370), Messrs. J. F. Thomas (343), R. M. Garnett (342), A. H. R. Wilson (286), Dr. N. H. Joy (285), Messrs. B. Clarke (262), W. Duncan (246), G. W. Thompson (227), The Lon. Nat. Hist. Soc. (203), Miss E. L. Turner (188), Dr. J. N. D. and Mr. T. L. Smith (181), Messrs. C. F. Archibald (170), J. R. B. Masefield (167), R. G. Willan (164), T. K. Craven (154), Rev. E. Peake (148), Mr. T. Kerr (145), Sir Richard Graham, Bt. (140), Mr. H. S. Greg (131), Mrs. L. Marshall (123), Messrs. F. Dipple (115), E. R. Paton (106), F. H. Lancum (105), Misses C. M. Acland (98), J. M. Ferrier (91), Mr. J. M. Fletcher (61), Misses I. Mayne (58), L. W. Streatfield (54), Dr. A. S. Corbet (53), Messrs. T. L. S. Dooly (52), F. J. Mitchell (49), P. Scott (47), Major W. M. Congreve (43), Messrs. R. Carlyon-Britton (39), B. J. Ringrose (39), Messrs. H. S. Gladstone (35), W. G. Bramley (34), Miss E. Mounsey Heysham (31), Messrs. S. G. Poock (30), G. Townsend (30), Bristol Naturalists' Soc. (27), Col. A. Porritt (25), and others who have ringed under 20 each.

## NUMBERS OF EACH SPECIES "RINGED."

|                      | '09-'18 | '19       | '20  | '21  | '22  | '23  | '24  | 25   | Total |
|----------------------|---------|-----------|------|------|------|------|------|------|-------|
| Crow, Carrion ..     | 22      | No record | kept | 16   | 11   | 18   | 59   | 37   | 163   |
| Rook ..              | 240     | 3         | 8    | 17   | 6    | 94   | 24   | 166  | 558   |
| Jackdaw ..           | 172     | 4         | 7    | 29   | 20   | 18   | 36   | 43   | 329   |
| Jay ..               | 36      | —         | 5    | 2    | 7    | 6    | 20   | 24   | 100   |
| Starling ..          | 6867    | 151       | 169  | 411  | 454  | 736  | 738  | 866  | 10392 |
| Greenfinch ..        | 2586    | 206       | 187  | 380  | 386  | 352  | 484  | 478  | 5059  |
| Goldfinch ..         | 10      | No record | kept | 20   | 12   | 10   | 19   | 5    | 76    |
| Twite ..             | 42      | —         | 3    | 1    | —    | 1    | 16   | —    | 63    |
| Redpoll, Lesser ..   | 136     | —         | 3    | 5    | 17   | 12   | 1    | 27   | 201   |
| Linnet ..            | 1255    | 46        | 122  | 272  | 377  | 575  | 435  | 560  | 3642  |
| Bullfinch ..         | 175     | 20        | 40   | 52   | 23   | 63   | 62   | 55   | 490   |
| Chaffinch ..         | 2639    | 220       | 367  | 521  | 618  | 635  | 764  | 672  | 6436  |
| Sparrow, House ..    | 464     | —         | 2    | 1    | 1    | 2    | 15   | 1    | 486   |
| Sparrow, Tree ..     | 188     | 17        | 20   | 48   | 40   | 32   | 70   | 45   | 460   |
| Bunting, Yellow ..   | 436     | 29        | 41   | 100  | 101  | 144  | 143  | 227  | 1221  |
| Bunting, Reed ..     | 340     | 20        | 39   | 59   | 54   | 39   | 27   | 57   | 635   |
| Lark, Sky ..         | 1727    | 51        | 41   | 63   | 64   | 61   | 114  | 44   | 2165  |
| Pipit, Tree ..       | 199     | 15        | 31   | 34   | 42   | 57   | 72   | 60   | 510   |
| Pipit, Meadow ..     | 1253    | 12        | 22   | 134  | 62   | 61   | 114  | 82   | 1740  |
| Wagtail, Yellow ..   | 101     | 5         | 5    | 26   | 19   | 20   | 14   | 44   | 234   |
| Wagtail, Grey ..     | 113     | 1         | —    | 11   | 25   | 37   | 34   | 58   | 279   |
| Wagtail, Pied ..     | 701     | 20        | 46   | 124  | 112  | 136  | 243  | 252  | 1634  |
| Creepers, Tree ..    | 12      | No record | kept | 24   | 13   | 11   | 4    | 31   | 95    |
| Tit, Great ..        | 765     | 8         | 26   | 31   | 18   | 23   | 20   | 37   | 928   |
| Tit, Blue ..         | 663     | —         | 6    | 12   | 32   | 11   | 33   | 33   | 790   |
| Tit, Coal ..         | 88      | —         | 15   | 3    | —    | 1    | 2    | —    | 109   |
| Tit, Marsh ..        | 52      | —         | —    | —    | 4    | —    | 4    | —    | 60    |
| Tit, Long-tailed ..  | 41      | —         | —    | —    | —    | 5    | 1    | —    | 47    |
| Wren, G.-crested ..  | 40      | 1         | 1    | 1    | —    | 7    | 22   | 47   | 119   |
| Shrike, R.-backed .. | 133     | 17        | 22   | 29   | 11   | 19   | 33   | 43   | 307   |
| Flycatcher, S. ..    | 730     | 65        | 114  | 157  | 72   | 126  | 208  | 215  | 1687  |
| Flycatcher, Pied ..  | 6       | No record | kept | 43   | 13   | 1    | 14   | 63   | 140   |
| Chiffchaff ..        | 70      | —         | 19   | 68   | 25   | 22   | 50   | 42   | 296   |
| Warbler, Willow ..   | 1764    | 108       | 206  | 284  | 274  | 402  | 436  | 454  | 3928  |
| Warbler, Wood ..     | 95      | 3         | 34   | 71   | 59   | 80   | 86   | 77   | 505   |
| Warbler, Reed ..     | 214     | 38        | 31   | 39   | 21   | 23   | 8    | 25   | 399   |
| Warbler, Sedge ..    | 242     | 32        | 30   | 80   | 50   | 57   | 45   | 16   | 552   |
| Warbler, Garden ..   | 112     | 14        | 55   | 55   | 42   | 56   | 100  | 52   | 486   |
| Blackcap ..          | 114     | —         | 21   | 32   | 37   | 26   | 25   | 28   | 283   |
| Whitethroat ..       | 372     | 85        | 130  | 179  | 133  | 177  | 138  | 245  | 1459  |
| Whitethroat, L. ..   | 128     | 13        | 28   | 23   | 19   | 33   | 18   | 12   | 274   |
| Fieldfare ..         | 85      | —         | —    | —    | —    | —    | —    | —    | 85    |
| Thrush, Mistle ..    | 607     | 21        | 33   | 77   | 103  | 171  | 139  | 185  | 1336  |
| Thrush, Song ..      | 9243    | 475       | 621  | 1042 | 1052 | 1702 | 2660 | 2882 | 19677 |
| Redwing ..           | 42      | —         | —    | 3    | —    | —    | 1    | —    | 46    |
| Ouzel, Ring ..       | 83      | 1         | —    | 3    | 5    | 26   | 7    | 59   | 184   |
| Blackbird ..         | 5207    | 386       | 469  | 918  | 920  | 1334 | 1985 | 1794 | 13013 |
| Wheatear ..          | 192     | —         | 11   | 75   | 155  | 83   | 97   | 103  | 716   |
| Whinchat ..          | 394     | 17        | 55   | 17   | 30   | 69   | 49   | 40   | 671   |
| Stonechat ..         | 136     | —         | —    | 5    | 25   | 56   | 27   | 66   | 315   |
| Redstart ..          | 209     | 15        | 12   | 135  | 76   | 102  | 58   | 134  | 741   |
| Nightingale ..       | 46      | 5         | 19   | 19   | 20   | 19   | 18   | 23   | 169   |

|                     | '09-'18 | '19            | '20 | '21 | '22 | '23 | '24  | '25  | Total |
|---------------------|---------|----------------|-----|-----|-----|-----|------|------|-------|
| Redbreast           | ..2668  | 162            | 299 | 494 | 507 | 865 | 753  | 844  | 6592  |
| Sparrow, Hedge      | ..1775  | 110            | 185 | 246 | 221 | 409 | 403  | 487  | 3896  |
| Wren ..             | .. 727  | 11             | 76  | 265 | 133 | 321 | 331  | 343  | 2207  |
| Dipper ..           | .. 139  | 5              | 8   | 18  | 8   | 19  | 55   | 48   | 300   |
| Swallow ..          | ..6778  | 512            | 307 | 382 | 821 | 889 | 1055 | 1173 | 11917 |
| Martin ..           | ..1697  | 87             | 87  | 144 | 245 | 296 | 900  | 959  | 4415  |
| Martin, Sand        | .. 714  | 32             | 52  | 37  | 18  | 159 | 234  | 271  | 1517  |
| Swift ..            | .. 6    | No record kept | 27  | 72  | 37  | 87  | 57   | 286  |       |
| Nightjar ..         | .. 47   | 2              | 6   | 7   | 5   | 10  | 7    | 4    | 88    |
| Wryneck ..          | .. 195  | —              | 17  | 8   | 8   | 2   | 20   | 13   | 263   |
| Cuckoo ..           | .. 110  | 7              | 7   | 20  | 16  | 22  | 20   | 23   | 225   |
| Owl, Long-eared     | .. 30   | —              | 2   | 10  | 12  | 7   | —    | 12   | 73    |
| Owl, Barn..         | .. 75   | 1              | 5   | 14  | 2   | 13  | 5    | 15   | 130   |
| Owl, Tawny          | .. 99   | 18             | 8   | 15  | 14  | 14  | 18   | 52   | 238   |
| Merlin ..           | .. 16   | No record kept | 1   | 6   | 4   | 9   | 22   | 58   |       |
| Kestrel ..          | .. 52   | 3              | 4   | 12  | 3   | 20  | 28   | 63   | 185   |
| Buzzard ..          | .. 2    | No record kept | 1   | 3   | 2   | 8   | 12   | 38   |       |
| Hawk, Sparrow       | .. 62   | —              | 5   | 4   | 9   | 19  | 21   | 26   | 146   |
| Heron, Common       | .. 111  | —              | —   | —   | 6   | 14  | 21   | 38   | 190   |
| Sheld-Duck          | .. 49   | 1              | 21  | 1   | —   | 4   | —    | 6    | 82    |
| Mallard ..          | .. 644  | —              | 1   | 41  | 58  | 180 | 281  | 127  | 1332  |
| Teal ..             | .. 96   | 33             | 20  | —   | 1   | —   | 135  | 148  | 433   |
| Wigeon ..           | .. 77   | 2              | 23  | 1   | 15  | —   | 3    | 1    | 122   |
| Duck, Tufted        | .. 65   | —              | —   | —   | 4   | 1   | —    | —    | 70    |
| Cormorant           | .. 491  | 72             | —   | —   | —   | —   | 8    | —    | 571   |
| Shag ..             | .. 156  | 10             | —   | —   | —   | 46  | 20   | 5    | 237   |
| Gannet ..           | .. 198  | —              | —   | —   | 26  | 119 | 425  | —    | 768   |
| Shearwater, Manx    | 69      | —              | 3   | —   | —   | 9   | 13   | 3    | 97    |
| Wood-Pigeon         | .. 184  | 9              | 19  | 33  | 26  | 61  | 181  | 184  | 697   |
| Dove, Stock         | .. 46   | 5              | 6   | 26  | 7   | 15  | 19   | 16   | 140   |
| Dove, Turtle        | .. 69   | 7              | 5   | 9   | 12  | 13  | 19   | 35   | 169   |
| Oystercatcher       | .. 94   | 6              | 4   | 5   | 7   | 20  | 70   | 41   | 247   |
| Plover, Ringed      | .. 142  | 1              | 19  | 39  | 19  | 47  | 75   | 39   | 381   |
| Plover, Golden      | .. 49   | —              | —   | 4   | 1   | 2   | 5    | 12   | 73    |
| Lapwing ..          | ..3910  | 123            | 125 | 220 | 345 | 358 | 597  | 778  | 6456  |
| Sandpiper, C.       | .. 192  | 16             | 13  | 10  | 24  | 37  | 44   | 34   | 370   |
| Redshank ..         | .. 295  | 3              | 13  | 25  | 26  | 32  | 39   | 46   | 479   |
| Curlew, Common..    | 210     | 4              | 14  | 36  | 67  | 58  | 110  | 59   | 558   |
| Snipe, Common       | .. 211  | 3              | 6   | 19  | 18  | 8   | 50   | 31   | 346   |
| Woodcock..          | .. 348  | —              | 17  | 8   | 31  | 28  | 57   | 84   | 573   |
| Tern, Sandwich      | .. 678  | 53             | 31  | 30  | 77  | 153 | 92   | 421  | 1535  |
| Tern, Common        | ..3854  | —              | 144 | 706 | 2   | 44  | 425  | 632  | 5807  |
| Tern, Arctic        | .. 85   | 20             | 25  | 24  | 2   | 1   | 9    | 15   | 181   |
| Tern, Little        | .. 175  | —              | 9   | —   | 9   | 1   | 29   | 25   | 248   |
| Gull, B.-headed     | 11950   | 11             | —   | 5   | —   | —   | 3    | —    | 11960 |
| Gull, Common        | .. 514  | —              | —   | —   | 26  | 36  | 59   | 16   | 651   |
| Gull, Herring       | .. 511  | 1              | —   | 6   | 9   | 20  | 43   | 19   | 609   |
| Gull, L. Blk.-bkd.. | 2621    | 77             | 471 | 197 | 455 | 120 | 565  | 197  | 4703  |
| Gull, G. Blk.-bkd.. | 78      | —              | —   | —   | 2   | 3   | 33   | 35   | 151   |
| Kittiwake           | .. 83   | 1              | —   | —   | 43  | 86  | 15   | —    | 228   |
| Razorbill ..        | .. 64   | —              | 5   | —   | 18  | 42  | 95   | 8    | 232   |
| Guillemot ..        | .. 23   | No record kept | —   | —   | 106 | 255 | 563  | —    | 947   |
| Puffin ..           | .. 903  | 2              | —   | —   | 8   | 45  | 19   | 2    | 979   |
| Moor-Hen ..         | .. 291  | 7              | 20  | 12  | 33  | 25  | 43   | 58   | 489   |

## SOME PERCENTAGES OF RECOVERIES.

| Species.                        | Number<br>Ringed<br>1909-24. | Number<br>of these<br>Recovered<br>to date. | Percentages<br>of<br>Recoveries |
|---------------------------------|------------------------------|---------------------------------------------|---------------------------------|
| Rook ... ..                     | 392                          | 16                                          | 4.08                            |
| Starling ... ..                 | 9,526                        | 507                                         | 5.3                             |
| Greenfinch ... ..               | 4,581                        | 37                                          | 0.8                             |
| Linnet ... ..                   | 3,082                        | 26                                          | 0.8                             |
| Chaffinch ... ..                | 5,764                        | 76                                          | 1.3                             |
| Yellow Bunting ... ..           | 994                          | 36                                          | 3.6                             |
| Reed-Bunting ... ..             | 578                          | 2                                           | 0.3                             |
| Sky-Lark ... ..                 | 2,121                        | 19                                          | 0.8                             |
| Tree-Pipit ... ..               | 450                          | 2                                           | 0.4                             |
| Meadow-Pipit ... ..             | 1,658                        | 21                                          | 1.2                             |
| Pied Wagtail ... ..             | 1,382                        | 27                                          | 1.9                             |
| Spotted Flycatcher ... ..       | 1,472                        | 4                                           | 0.2                             |
| Willow-Warbler ... ..           | 3,474                        | 21                                          | 0.6                             |
| Whitethroat ... ..              | 1,214                        | 5                                           | 0.4                             |
| Mistle-Thrush ... ..            | 1,151                        | 23                                          | 1.9                             |
| Song-Thrush ... ..              | 16,795                       | 215                                         | 1.2                             |
| Blackbird ... ..                | 11,219                       | 249                                         | 2.2                             |
| Wheatear ... ..                 | 613                          | 10                                          | 1.6                             |
| Whinchat ... ..                 | 631                          | 5                                           | 0.7                             |
| Redstart ... ..                 | 607                          | 2                                           | 0.3                             |
| Redbreast ... ..                | 5,748                        | 219                                         | 3.8                             |
| Wren ... ..                     | 1,864                        | 3                                           | 0.1                             |
| Swallow ... ..                  | 10,744                       | 78                                          | 0.7                             |
| Martin ... ..                   | 3,456                        | 23                                          | 0.6                             |
| Sand-Martin ... ..              | 1,246                        | 6                                           | 0.4                             |
| Swift ... ..                    | 229                          | 6                                           | 2.6                             |
| Cuckoo ... ..                   | 202                          | 7                                           | 3.4                             |
| Tawny Owl ... ..                | 186                          | 12                                          | 6.4                             |
| Kestrel ... ..                  | 122                          | 9                                           | 7.3                             |
| Sparrow-Hawk ... ..             | 120                          | 21                                          | 17.5                            |
| Heron ... ..                    | 152                          | 21                                          | 13.8                            |
| Mallard ... ..                  | 1,205                        | 173                                         | 14.3                            |
| Teal ... ..                     | 285                          | 22                                          | 7.7                             |
| Cormorant ... ..                | 571                          | 100                                         | 17.5                            |
| Shag ... ..                     | 232                          | 27                                          | 11.6                            |
| Gannet ... ..                   | 768                          | 25                                          | 3.2                             |
| Wood-Pigeon ... ..              | 513                          | 25                                          | 4.8                             |
| Ringed Plover ... ..            | 342                          | 4                                           | 1.1                             |
| Lapwing ... ..                  | 5,678                        | 164                                         | 2.8                             |
| Common Sandpiper ... ..         | 336                          | 2                                           | 0.6                             |
| Redshank ... ..                 | 433                          | 22                                          | 5.08                            |
| Curlew ... ..                   | 499                          | 19                                          | 3.8                             |
| Snipe ... ..                    | 315                          | 29                                          | 9.2                             |
| Woodcock ... ..                 | 489                          | 58                                          | 11.8                            |
| Sandwich Tern ... ..            | 1,114                        | 14                                          | 1.2                             |
| Common Tern ... ..              | 5,175                        | 100                                         | 1.9                             |
| Black-headed Gull ... ..        | 11,969                       | 526                                         | 4.3                             |
| Common Gull ... ..              | 635                          | 16                                          | 2.5                             |
| Herring-Gull ... ..             | 590                          | 18                                          | 3.05                            |
| Lesser Black-backed Gull ... .. | 4,506                        | 175                                         | 3.8                             |
| Guillemot ... ..                | 947                          | 16                                          | 1.6                             |
| Puffin ... ..                   | 977                          | 1                                           | 0.1                             |



# NOTES

## THE INCUBATION- AND FLEDGING-PERIODS OF SOME BRITISH BIRDS.

THE incubation- and fledging-periods of the following species were obtained during 1924 and 1925 and are additional to those previously published by me. As regards the Passerine species, the incubation is the time from the day the last egg was laid to the day the eggs hatched, and the fledging-period is from the day of hatching to the day the young left the nest.

|                                                         | Incubation-<br>Period.<br>Days. | Fledging-<br>Period.<br>Days. |
|---------------------------------------------------------|---------------------------------|-------------------------------|
| Chaffinch ( <i>Fringilla c. cælebs</i> ) ...            | 11                              | 13                            |
| Long-tailed Tit ( <i>Agithalos c. roseus</i> ) ...      | 16, 15                          | 16, 16                        |
| Spotted Flycatcher ( <i>Muscicapa s. striata</i> ) ...  | 14                              | 14                            |
| Pied Flycatcher ( <i>M. h. hypoleuca</i> ) ...          | 12                              | 13                            |
| Willow-Warbler ( <i>Phylloscopus t. trochilus</i> ) ... | 13, 14                          | 13, 13                        |
| Wood-Warbler ( <i>Ph. s. sibilatrix</i> ) ...           | 13                              | —                             |
| Whitethroat ( <i>Sylvia c. communis</i> ) ...           | —                               | 12                            |
| Song-Thrush ( <i>Turdus ph. clarkii</i> ) ...           | 12                              | 13                            |
| Blackbird ( <i>T. m. merula</i> ) ...                   | 14                              | 13                            |
| Whinchat ( <i>Saxicola r. rubetra</i> ) ...             | —                               | 13                            |
| Robin ( <i>Erithacus r. melophilus</i> ) ...            | 13                              | 13                            |
| Hedge-Sparrow ( <i>Prunella m. occidentalis</i> ) ...   | 13, 11, 11                      | 12, 12, 13                    |
| Wren ( <i>Troglodytes t. troglodytes</i> ) ...          | 16                              | —                             |
| Dipper ( <i>Cinclus c. gularis</i> ) ...                | 15-16, 16                       | —                             |
| Tawny Owl ( <i>Strix aluco sylvatica</i> ) ...          | 28                              | 32-33                         |
| Merlin ( <i>Falco c. aesalon</i> ) ...                  | —                               | 25                            |
| Buzzard ( <i>Buteo b. buteo</i> ) ...                   | —                               | 39                            |
| Stock-Dove ( <i>Columba ænas</i> ) ...                  | —                               | 24                            |

R. H. BROWN.

WITH reference to the notes on Fledging-Periods (*antea*, p. 249), is it not possible that in some of the instances recorded—e.g. those for the Great Tit—a longer or shorter fledging-period may be due to the situation and surroundings of the nest?

I had two Starling (*Sturnus v. vulgaris*) nests under observation in 1920 which suggested this to me. They were in

the same house and not much more than a dozen yards apart. Nest *A* was in a nest-box on the wall among the branches of a plum tree; eggs hatched May 14th, young flew June 5th—fledging-period 22 days (the same as that given in *A Practical Handbook*). Nest *B* was in a hole in the house wall with a sheer drop of 20 ft. to a paved yard, and nothing to break it but a few telephone wires which would give poor foothold for unsteady fledglings. This nest cannot be approached nearer than 8 ft. so the exact date of hatching is uncertain, but the young could be heard squeaking a few days before those in nest *A* were audible at a much less distance. A young bird was picked up dead below the nest on May 28th and was as fully developed as the young in nest *A* on the day they flew. The others left safely on June 6th, so the fledging-period in this case was probably not less than 26 days and may have been three or four days longer. I should add that Starlings had used nest-hole *B* for several years, and I always reckoned they were about four weeks from the time the young could first be heard to the time they flew. MARJORY GARNETT.

WITH reference to the notes on Fledging-Periods (*antea*, p. 249), the following few cases may be of interest. I have picked out only those in which I inspected the nest at least once a day at the period of hatching and fledging, so that they are, at any rate, absolutely accurate.

GREENFINCH (*Chloris ch. chloris*).—(A) Four eggs, hatched on the morning of May 16th, 1923, young fledged morning of June 2nd. Period 17 days. This was probably a quite abnormal bird, as the nest was commenced on April 11th and was still empty on May 2nd. On the 5th it contained two eggs and the bird was sitting on four on the 12th. The weather from May 28th to June 2nd was cold and dismal, with a temporary improvement on the 3rd.

(B) Five eggs, hatched on June 1st, 1925. Young fledged on the morning of 15th. Period 14 days.

BLUE TIT (*Parus cœruleus obscurus*).—(A) Five eggs, hatching at 10 a.m. on June 12th, 1923, two chicks out. Young fledged on July 1st. Period 19 days.

(B) Eleven eggs, hatched on May 16th, 1925. Young fledged on June 4th. Period 19 days.

SONG-THRUSH (*Turdus ph. clarkei*).—Five eggs, hatched April 25th, 1925. Young fledged on the morning of May 8th. Period 13 days.

COMMON WREN (*Troglodytes t. troglodytes*).—Hatched May 15th, 1925. Young fledged on the morning of 31st. Period 16 days.

CHARLES E. ALFORD.

## HOODED CROWS KILLING A LAMB.

WITH reference to Mr. Thompson's note (*antea*, p. 252) on a pair of Magpies killing a full-grown rabbit, I saw in June, 1905, on the west coast of Sutherland, two Hooded Crows (*Corvus c. cornix*) actually destroy a lamb that was several weeks old. The animal got into difficulties in marshy ground, at some little distance from its mother. The Crows immediately attacked, and when I had rushed up to the scene of the tragedy from a distance of about 400 yards, both eyes had been pecked out, and the lamb was dying, apparently from injury to the brain inflicted through the eye-sockets. Such incidents are no doubt only observed on rare occasions, but their occurrence is probably common enough. All the Crow-tribe are specially quick to take advantage of exceptional circumstances bringing within their reach victims of a size that would render them ordinarily immune to their attack.

ALAN H. SIMPSON.

## SERINS IN KENT.

IT may be of interest to state that on the afternoon of February 23rd, 1926, I chanced with great good fortune upon a small company of Serins (*Serinus canarius serinus*) in the vicinity of Tunbridge Wells. Seven or eight in number, they were perched in the upper branches of a tree in an open field bordering on the Eridge Park cricket ground, and inspired, apparently, by the genial sunshine and warmth of the afternoon, sang their characteristic hissing chorus within twenty yards of me for fully ten minutes without a break, before taking wing.

HENRY S. DAVENPORT.

## INCUBATING HABITS OF CROSSBILL.

BY observing a nest of the Crossbill (*Loxia c. curvirostra*) in Norfolk from March 19th to 22nd, 1925, inclusive, we found that the hen never left the nest to feed during this time. She was fed at the nest every hour by her mate, who regurgitated yellow oily matter—evidently digested fir seeds, and after being fed she flew away for three to five minutes only. The young hatched on the 21st.

H. A. GILBERT.

## CALL-NOTE OF THE CHAFFINCH.

WHILE in the Swiss National Park a bird was heard frequently uttering a single, drawn-out, vibrating note, somewhat resembling the syllable "dwee-e-e": being not unlike that of the Greenfinch. It generally sang from the top of a conifer

in the denser parts of the forest and was very difficult to observe closely, but after a time we found to our surprise that the bird was the Chaffinch (*Fringilla c. cœlebs*). The date was early July, 1925, and the altitude about 5,000 ft. I remember having heard the note previously both at Murren and at Wengern Alp in the Bernese Oberland in coniferous woods at a height of about 5,000 feet or more in August, 1921. Later, we noticed that the call seemed general for the district, so that the variation is apparently not due to altitude. In August, 1925, Mr. J. D. Clarke heard the note frequently in pine woods at Heidelberg, but in September noticed a general return to the normal "spink."

Mr. H. G. Alexander tells me that he has heard the note on many occasions, in England as well as on the Continent; and he has very kindly placed his notes on the subject at my disposal. His records are as follows:—

Pine woods above Champéry, Valais, Switzerland, 3450 ft., August 1912. Birds in the lower woods were heard to give the usual "spink"; Pine woods, Frensham, Surrey, April; Pine woods, Broadwater Forest, Tunbridge Wells, Sussex, March and April, various years. Also pine woods of Ashdown Forest, Sussex. Subsequently the note was heard in Ashdown Forest in June.

The note seemed to be so constantly associated with pine woods that Mr. Alexander had come to refer to it as the "Pine note." He has, however, heard the note away from pine trees on one or two occasions, *e.g.*, Winchelsea, Sussex, April 4th, 1913.

It seems that this call has no marked correlation with altitude; nor does it seem to be very markedly seasonal save that I have no records later than August. It may be a geographical variation, but here again the evidence is conflicting; on the other hand, the correlation with coniferous woods does seem very marked, inexplicable as it is.

Although but a small point, it is not without interest and seems worth attempting to clear up. Doubtless readers of *British Birds* will be able to supply further notes on the subject.

W. H. THORPE.

[In my notes under date May 10th, 1903, I find that in the forests of North Jutland, which are almost entirely deciduous and consist largely of beech, one heard in all directions the peculiar, long-drawn, Greenfinch-like notes of the Chaffinch, while, on the other hand, we never once heard the familiar "Pink, Spink," note which is so characteristic of this species in England. These woods are but little above sea-level. On

the other hand, I have not heard an English Chaffinch uttering this note, although it might be occasionally used, but overlooked. In Norway and Germany I have also heard it and regard it as geographical. We can trace no necessary correlation with coniferous woods.—F.C.R.J.]

#### TAMENESS OF MARSH-TITS.

As I think it is unusual for Marsh-Tits (*Parus palustris dresseri*) to become confiding (as do very often Great and Blue Tits when they are fed at a bird-table) it may be worth while recording that in January, 1925, I tamed a pair of wild Marsh-Tits so that they would come into the dining-room to fetch food. In March they disappeared, but returned on October 13th. Since then they have fed daily from the hand and constantly frequent the room. A. HIBBERT-WARE.

#### NESTLING OF THE FIELDFARE.

As the down of the nestling Fieldfare (*Turdus pilaris*) is not described in the *Practical Handbook* (see Vol. I., p. 393) the following description of a nestling about one day old may be useful. I took notes of this nestling on May 28th, 1925, at Moen, Surendal, Norway, and brought it home in spirit for Mr. Witherby's re-examination of the down-tracts.

Down, buff, fairly long and plentiful. Distribution, outer (short) and inner supra-orbital, occipital, spinal, humeral and ulnar. Mouth, inside yellow, no tongue-spots; externally, flanges yellowish-white. J. L. CHAWORTH MUSTERS.

#### BLACK REDSTARTS IN MERIONETH.

An immature Black Redstart (*Phœnicurus ochrurus gibraltariensis*) was seen repeatedly at Aberdovey by Messrs. E. H. T. Bible and Edwyn Hughes between December 20th, 1924, and March 1st, 1925. In December, 1925, two were observed—a female and young male; whilst on January 12th, 1926, an adult male was seen about two miles away. Taken in conjunction with recent records in *British Birds* it seems evident that there has been a considerable influx of the species into Britain this winter. H. E. FORREST.

#### BLUETHROAT WINTERING IN YORKSHIRE.

ON November 15th, 1925, a Bluethroat (*Luscinia svecica*), whether of the Norwegian or Lapland form I do not know, made its appearance in the garden attached to my house, well within the borough boundary of Scarborough. It again appeared on the 16th, the 21st, and 22nd, being very tame and

permitting close inspection at five or six feet distance. Various foods were placed out for it and it preferred very rich pastry to anything else, but on various occasions it foraged on the lawn, capturing leather-jackets and small earthworms. It reappeared on December 23rd, 24th and 26th, and on January 14th and 20th, 1926. It was seen no more for more than a month, but reappeared on February 22nd and 24th, and thereafter every day up to the time of writing on March 16th. It appears to be in very vigorous health and excellent condition and plumage and shows no trace of having suffered any injury which might have prevented its migration. On February 28th it was also seen by Mr. T. N. Roberts, on March 4th by Mr. J. A. Chadwick and on March 7th by Mr. W. Gyngell, three local ornithologists who are all convinced of its identity. At the back of my house is a large neglected orchard, and it is here that the bird makes its home.

The bird is very Robin-like in its actions. It has a habit of sitting upon a spout and darting out several yards to catch passing flies, returning to the same place just as a Flycatcher would.

The blue throat-band above the chestnut patch on the breast seems now to be extending down the side of the breast, but the throat and chin are uniform pale fawn-colour with no blue.

W. J. CLARKE.

#### NOTES ON NESTING OF GREAT SPOTTED WOOD-PECKER.

WITH reference to Mr. J. H. Owen's article (*antea*, p. 125) on the nesting of the Great Spotted Woodpecker (*Dryobates m. anglicus*) the following may be of interest. In the two or three nests I have observed carefully I have always found the birds to be at work, when boring, at 10 a.m.; they may have been at many other times of the day, but this is the time I have always been able to watch them. I have found June 1st to be the time for a full clutch in Lincolnshire, the Green Woodpecker (*Picus v. virescens*) having the same at any time from May 18th to June 2nd. I have not yet come across a Great Spotted Woodpecker returning to an old hole to nest. I feel sure they begin to sit with the first egg, and the following are some notes from 1921:—

May 19th—21st.—Male boring hole (35 ft. up) from outside.

May 22nd.—Male clearing hole from inside.

May 25th.—Female came out of hole 10.15 a.m., mating took place and male went into hole and remained. This seems to confirm Mr. Tracey's note (*antea*, p. 152).

June 5th.—Female on nest and on this date I found that one egg contained an embryo forming, one was just “struck,” and the remaining three were in intermediate stages of incubation.

1922, May 25th, 26th and 27th, both birds taking turns at throwing out chips from inside: this clutch also consisted of five eggs, which were successfully brought off, having, I believe, hatched on June 18th, while the young left the nest on July 6th.

In 1920 I found a pair feeding nearly fledged young on June 21st.

JOHN S. REEVE.

#### COMMON BUZZARD IN ESSEX.

ON February 22nd, 1926, in Gillwell Lane, Chingford, I had a good view of a Buzzard, but although it flew quite low I was unable to identify the species with certainty. On the 24th I saw the bird again, and so well that no doubt was left as to its being a Common Buzzard (*Buteo buteo*). On the 28th, when I was in company with Mr. and Mrs. Boyd Watt, the bird left Gillwell Park and circled high up, near enough for us to watch it with our field-glasses. It then settled on a tree and for a quarter of an hour we heard it “mewing,” and we occasionally heard an answering “mew” from a distance.

A. HIBBERT-WARE.

#### WHITE-TAILED EAGLE IN THE SCILLY ISLES.

IN “The Birds of Scilly” by Clarke and Rodd (*Zoologist*, 1906, p. 299) it is stated that: “No eagles have so far been observed in Scilly, but there is a tradition of a White-tailed Eagle (*Haliaëtus albicilla*) having been seen near the Seven Stones in 1835.” (This is not in Scilly.) In November, 1924, occurred what is the first record of a White-tailed Eagle in Scilly. It frequented the eastern end of Tresco, St. Helens, and the adjoining islands, and was so tame that its identification by two competent naturalists (who do not desire their names mentioned) was easy. It stayed over a fortnight and was not molested.

H. W. ROBINSON.

#### GADWALL IN SHROPSHIRE.

MISS FRANCES PITT tells me that on October 14th, 1925, two Gadwalls (*Anas strepera*) came down to the ponds in the grounds of The Albynes, Bridgnorth. They did not stay, but left almost immediately. The weather was cold; wind N.E. The species is rare in Shropshire, this being only the fifth recorded occurrence.

H. E. FORREST.

[Cf. the Staffordshire records, *antea*, p. 233.—EDS.]

INCREASE OF CURLEW BREEDING IN  
HEREFORDSHIRE.

THE Curlew (*Numenius a. arquata*) has increased as a breeding bird in the last five years to a remarkable degree in Herefordshire, and now breeds all over the county. Last year (1925) nests were reported to me at Bromyard on the Worcester border, and at Much Marcle on the edge of Gloucestershire.

H. A. GILBERT.

ROSE-COLOURED STARLINGS IN OUTER HEBRIDES AND PERTHSHIRE.—Dr. W. E. Clarke records (*Scot. Nat.*, 1925, p. 148) the occurrence of an adult male *Pastor roseus* at St. Kilda on July 9th, 1925. The bird has not hitherto been known to occur in either the Outer or Inner Hebrides. In the same journal (p. 180) Mr. R. Kennedy states that an example was shot at Invergowrie on October 5th, 1925.

WHITE WAGTAIL NESTING IN ARGYLLSHIRE.—Mr. J. Bain states (*Scot. Nat.*, 1925, p. 152) that a pair of *Motacilla alba alba* nested in 1925 near Oban, and further that in a quarry in the town a male Pied and hen White Wagtail nested. No evidence for identification is given.

WAXWINGS IN PERTHSHIRE AND WESTMORLAND.—Lord Scone informs us that a single Waxwing (*Bombycilla garrulus*) was seen on February 20th, 1926, on the outskirts of Perth. With reference to the Waxwing seen in Westmorland (*antea*, p. 232) Mr. H. W. Robinson informs us that one or more were seen in the southern part of the county in the last week of January, 1921, and several in the early summer of 1903 in the same locality. These do not appear to have been previously recorded (*cf. B.B.*, VIII., p. 15).

GANNET ATTEMPTING TO BREED IN YORKSHIRE.—As already recorded (*vide antea*, p. 30), a pair of Gannets (*Sula bassana*) frequented the Bempton Cliffs in 1924. In the *Naturalist* (1926, p. 9) it is stated that a pair built a nest in 1925, but no egg was seen.

WOOD-SANDPIPER IN NORTH UIST.—Mr. G. Beveridge reports (*Scot. Nat.*, 1925, p. 179) that he shot a Wader, identified at the Royal Scottish Museum as a Wood-Sandpiper (*Tringa glareola*) on October 19th, 1925, at Lochmaddy. The Wood-Sandpiper is a rare visitor to Scotland, and so far as we know, has not previously been recorded from the Outer Hebrides.





# REVIEWS



*The Origin of Birds.* By Gerhard Heilmann. (Witherby.) Illustrated.  
20s.

THIS is a book which is bound to be read by anyone who takes his Ornithology seriously. It is a book we have been waiting for; and now that at long last we have got it, we are glad to be able to say that substantially and with the inevitable exception of minor details, it is a book for which we are full of enthusiasm, not to say gratitude.

In saying that we have been waiting for it we do not mean to imply that we have been waiting for this particular and fascinating book of Mr. Heilmann's, for in point of fact it was only recently that we became aware that he was writing one on the subject. What we meant to imply was that in view of the extreme interest of the illusive origin of birds, with which it deals, it seems strange that hitherto no one has had the courage, or enterprise, to sit down as Mr. Heilmann has done, and collect, compile, collate and expound all the facts, theories and ideas, new and old, with which the subject is beset.

In point of fact, if it had come sooner this book might not have been so good; for Mr. Heilmann is happily fortunate in this respect, that the appearance of his book coincides with a period in which a good deal of work has been done by Petronievics and Smith-Woodward on the fossil *Archæopteryx*, preserved in the British Museum, as well as by Dr. Broome of South Africa on certain primitive reptiles of the *Pseudosuchia* and allied groups, and by such workers as Baron Nopcsa on the Pro-avian.

The more light that is thrown on these recently resurrected *Pseudosuchians*, the more probable it seems that from somewhere in their close neighbourhood, or possibly, and perhaps more probably, from a rather more primitive and generalized predecessor, arose that long-sought common ancestor, which must have given origin to the several divergent groups of Dinosaurs on the one hand and to birds on the other.

Not the least interesting of these divergent groups of Dinosaurs is the group known as the *Coelurosaurs*, and among many absorbing pictures of the past Mr. Heilmann vividly sketches for us, both with brush and pen, such wholly fascinating forms as *Struthiomimus*, the Ostrich-mimic; *Ornitholestes* the bird-robber; *Saltopus* the Jumper and *Compsognathus* the "fine-jawed" one. Incidentally he seems to shatter, with a formidable array of facts, the somewhat antiquated and stale view which connected the *Predentates* or *Ornithopoda* (*Iguanodon*, etc.) with some share in the origin of birds. At the same time he collects and marshalls for us the facts which have caused him, in common with recent workers, to turn to such forms as *Ornithosuchus*, *Euparkeria*, and others, for clues in the search for the Pro-avian; for if the *Coelurosaurs*, as he seems to think, are too specialised and lacking in certain essential features, the *Predentates* are indeed quite out of the picture; while the *Pseudosuchians* seem, at least, to bring us within practical striking distance of our quarry.

So, with these last forming a definite and satisfactory basis from which to work, the Pro-avian has been hunted down and reconstructed by an ardent band of workers, prominent among whom has been our

author, not to forget Baron Nopcsa, Broom, Osborne, von Huene and others, all of whose work has been discussed, and a most useful list of literary references given at the end of each of the four sections into which the book is divided.

In Part IV. a description and presentment of the author's idea of the Pro-avian is given, and this we will leave for the reader's own discovery; for already we have been getting on too quickly, and if we are to appreciate the craft of the palæontologist in tracking down the generalized and primitive common ancestor from which birds and reptiles arose, it is necessary to have gained some definite knowledge of the structure, appearance, and even the habits of the oldest birds, so far discovered. In Part I. Mr. Heilmann, setting out to provide us with this knowledge, has, I think, succeeded in full measure.

No book, in fact, that has ever previously appeared has, I venture to think, contained anything approaching to such a complete account of those reptilian-birds known as *Archæopteryx* and *Archæornis*. Mr. Heilmann has specialized on the Berlin fossil—*Archæornis*—which he has studied minutely on the spot. He has given us such a careful description of every detail of it and has so reconstructed it and made it live again, illustrating his description with such a profusion of cuts, photographs and drawings, made by himself and others, that these primitive Jurassic adumbrations of the bird have been brought most vividly before us, so that we see, as we come to the end of their story, that founded as it is on solid, scientific details and conclusions, we have actually been put into possession of a very real conception of what they were probably like.

To tell the tale which Mr. Heilmann, a Dane, sets out to tell in this book, and in English, is a very difficult task; because, while it is not what one could describe as a popular book, and in fact is crammed with scientific knowledge, it is yet written in such a way that any serious-minded ornithologist, although not an anatomist, could with a very little application grasp its details and points and finally put the book down with the feeling that he had profited immensely by its study, and that he had had brought to his mind a new and vastly absorbing chapter in the history of birds.

Part II. deals with embryonic stages in reptiles and birds; Part III. with anatomical and biological data.

It is inevitable that in a book of this nature there are points with which one does not find oneself in agreement—one of these, not connected with actual technical details, is the attack made on pages 142-3 on a prominent scientist. While we might agree that the views expressed by the said scientist are so crude as to be deplorable, the spirit and method by which he has been attacked is very much to be regretted and forms a jarring note on an otherwise legitimate criticism.

In the figure (4) of *Archæornis* on page 9, the quadrato-jugal is represented in Mr. Heilmann's reconstruction as postero of the quadrate. This seems to require some explanation, for we can hardly believe that it could be simply explained by lateral shearing and consequent displacement.

PERCY R. LOWE.



# LETTERS



## LIFTING POWER OF THE GOLDEN EAGLE.

*To the Editors of BRITISH BIRDS.*

SIRS.—When I was filming the Golden Eagle two and three years ago I had good opportunities of observing the weight-lifting powers of the bird. In one eyrie there was a lamb not less than a fortnight old, and at another I saw the male Eagle bring mountain hares to the nest. On one of his visits he was flying at a height of about 500 feet and seemed to be carrying the hare with the greatest ease; and on another occasion he flew across the great valley beneath the nest, and it looked as if the hare made no difference to his flight or speed of travelling. Also he had no difficulty in landing at the nest with these burdens.

In my opinion, an Eagle with its full flight-feathers, that is, providing it is not moulting, would have no difficulty in carrying hares or young lambs distances of two or three miles.

OLIVER G. PIKE.

LEIGHTON BUZZARD.

*To the Editors of BRITISH BIRDS.*

SIRS,—I am convinced this question needs a great deal more investigation. I have lived in Golden Eagle country all my life almost, and I think it is a very remarkable thing how seldom one sees the Eagle strike down or carry its prey. During the summer of 1924 I watched for three days at an eyrie in sheep country. There were three or four lambs in the eyrie, all in an advanced stage of decomposition, and the shepherd was quite certain that all these lambs were stillborn ones. During the summer of 1925 my wife and I watched at an Eagle's eyrie almost daily for twelve weeks of the Eaglets' nestling period. During this time the heaviest prey brought was roe-deer calves, four of which met their end. They may, of course, have been left by their does or even stillborn; even to see a certain animal in the eyrie does not prove that the Eagle actually *killed* it. The case with which Eagles can be caught in traps baited with hares or cats shows that they like carrion. The blue hares brought to this eyrie were generally brought from above. The eyrie was situated about 1,500 ft. above the sea, with hills 2,000 ft. higher up and forest 500 ft. below. The roe-deer calves must all have been found not less than 500 ft. *below* the nest.

On June 28th my wife was in the hide when a roe calf was brought. I should mention that the eyrie was in a tree on a very steep hillside. Judging by the behaviour of the young Eaglets at 10.45 on this day the cock Eagle landed on a tree *below* the tree on which the eyrie was situated. Here, to the indignation of the Eaglets, the cock remained for a quarter of an hour. Then with much flapping, heard by my wife, the cock flew up the steep hillside and landed on the edge of the eyrie, carrying the roe calf in one foot. He was quite exhausted and had his beak wide open for several minutes, although he had rested for a quarter of an hour in a neighbouring tree. The calf was under a week old but was minus the head and part of the entrails. At this eyrie we noticed that the prey was always carried in one foot. It appears that the evidence on this subject is conflicting, and probably a great deal depends on the actual

circumstances, such as wind and position of the prey ; but the day my wife observed the roe calf being brought there was no wind to help the Eagle and this may account for his exhaustion.

This season I hope to make some more observations from a hide and if possible to weigh some of the prey brought to the eyrie.

SETON GORDON.

*To the Editors of BRITISH BIRDS.*

SIRS,—With reference to my previous letter on this subject (pp. 259–60), John McKenzie, whom I mentioned as having further information on the subject, now writes me that of the five remains of lambs killed by Eagles he has seen, only one was whole. This was a lamb about two days old and he thinks it was not lifted.

Mr. W. Marshall has kindly obtained for me the following very interesting statement from a shepherd named John Grant :—

“Some years ago I was a shepherd in Inverlaidnan Glen. About the first week of May, in the height of the lambing season, I was an eyewitness of the following :

“Along with another shepherd (now deceased), about eight o’clock in the evening, we were attending to a ewe and young lamb. We looked up and saw an Eagle about two hundred yards from us. It circled round two or three times and made a swoop down at a lamb. The mother of the lamb promptly rushed at the Eagle and knocked it on its back in the heather. After recovering from the blow the Eagle rose and flew away for about thirty yards and dived down at another lamb and carried it away. He rose from the ground in circles to a considerable height and flew along the slope of the hill. He gradually descended again and when close to the ground lost hold of the lamb, which fell some fifteen or twenty feet into the heather. From the time the Eagle attacked the first lamb and carried away the second we shouted and made the dogs bark, but the bird was so determined that it did not heed us. When we got up to the lamb it was still alive and able to run a little. It was bleeding on its right side from a nasty wound, and when we took it to its mother she refused to take it. We took the lamb home but it was dead next morning. The lamb was four days old and a good specimen. I vouch the above to be a perfect fact.”

On the evidence I think that the Golden Eagle takes lambs—nearly always very shortly after birth—at times ; but that it does so on rare occasions only, otherwise more evidence would be forthcoming. Moreover, Eagles hunt McKenzie’s ground every day and he has had few losses in fifteen years.

As regards the bird’s weight-carrying capacity it seems to me that Mr. C. H. Donald has described it correctly, and that 10 to 11 lbs. is about the maximum on level ground. John McKenzie estimates the weight of new born lambs to be 8 lbs., and says some shepherds put it as low as 6, while others think it to be as much as 9 lbs. However, Mr. William Marshall is going to weigh lambs this season in order to clear up this point.

H. A. GILBERT.



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NORMAN F. TICEHURST, O.B.E., M.A., F.R.C.S., M.B.O.U.

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## ON SWAN-MARKS.

BY

N. F. TICEHURST, O.B.E., M.A., F.R.C.S., ENG.

(PART II.)

The remaining group consists of a large number of marks of a very miscellaneous character. Some resemble in arrangement many marks in the last group, but the objects they are meant to depict are exceedingly obscure. Others are partly of a quasi-heraldic character and yet others appear to be completely arbitrary arrangements of triangles, hoops, squares, crosses, etc., without any meaning that is apparent to us of the present day. Most of them are impossible of description without the aid of drawings.

THEIR NAMES.—It is not improbable that a very large number of marks had colloquial names by which they were spoken of and designated in deeds, etc., but very few of these have survived. Those that I have come across all belong to marks of the Fenland area, a few heraldic in type, but most belonging to the last group but one. Some few names have been gathered from wills and deeds, though in the absence of any accompanying drawing it has not always been possible to identify the marks to which they belong. The only roll known to me that records any of these names is the one belonging to Mr. Henry F. Cooper of Woodhall Spa and was in the seventeenth century the property of his ancestor, Sir Oliver Cromwell of Hinchinbrook, Hunts, uncle of the Protector. Some thirty of these names are given on this roll, but not all, from original abbreviation or subsequent fading, are in a readable condition; others appear to be words that have long passed out of use and whose meaning is anything but plain, while several are distinctly quaint and seem rather far-fetched (*cf.* the names of the Sussex, Oxfordshire and Somersetshire land and allotment marks in *Archæologia*, XXXVII., p. 388).

Many marks would seem, by the way they and their owners' names have been copied from one roll to another, to have been known by the names of the original owners long after they had passed away. For instance many Abbots and Priors appear as owners of marks on rolls of early seventeenth century date, and there are one or two instances even up to the beginning of the nineteenth century. Similarly the marks and names of certain middle and late fifteenth century private owners are constant features of Broadland seventeenth century rolls.

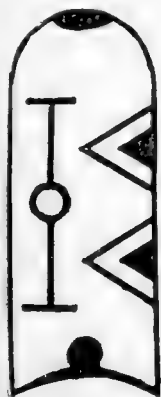
It is obvious that a game of Swans marked with any given mark might and no doubt often did outlast one and even many human generations. Amongst those with an interest in the Swans of any given district each game was undoubtedly known and habitually spoken of as "the game of the so-and-so mark,"

45. William Bryan, Chief Warrner of Bolingbroke, Lincs, d. 1573.

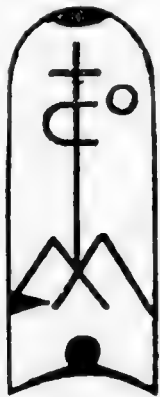
46. Sir William Coningsby, Judge, of Eston Hall, Wallington, Norfolk, d. 1540.

47. Thomas Proctor of Wisbech, Cambs., *viv.* 1617.

48. William Callowe of Holbeach, Lincs.



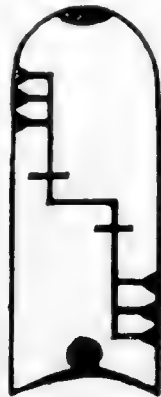
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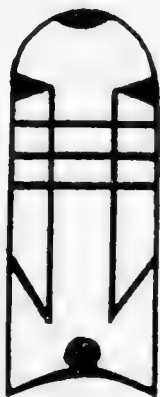
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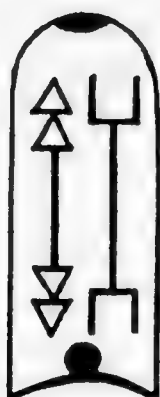
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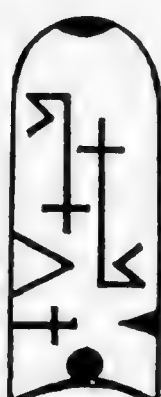
49.



50.



51.



52.

49. Richard Balder of Sutton St. Mary's, Lincs, d. 1623.

50. Henry Hawe of Hilgay, Norfolk, *viv.* 1560.

51. Adam Harte of Walpole in Marshland, Norfolk, d. 1573.

52. Sir William Fitzwilliams of Milton in Castor, Northants, Constable of Fotheringhay, d. 1599.

(The above are all Fenland marks, 45 to 51 from Add. MS. 6301 ; 52 from Add. MS. 6302.)

## EXAMPLES OF NAMED MARKS.

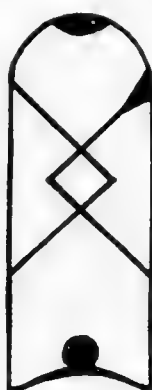
53. "the skorge"—The monastery of Crowland's mark.  
 54. "Dobyll pylyer" (*i.e.* double fish-spears)—Thomas Diggle of Crowland.  
 55. "ye tonges"—John Death of Gosberton, Lincs.  
 56. "the dobll pelles" (*i.e.* baker's peels)—Thomas Gray of Wisbech, Cambs.



53.



54.



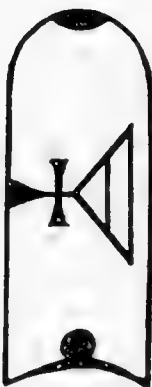
55.



56.



57.



58.



59.



60.

57. "ye crose spritts" (*i.e.* crossed punt-poles; "spreader," Cambs.)  
 —Millicent Smith of Water Newton, Hunts.  
 58. "ye storrope" (*i.e.* stirrup)—William Goldwell of Wisbech, Cambs.  
 59. "the Hammer head and Roman R."—Robert Ladde, alias Baker, of Terrington in Marshland, Norfolk.  
 60. "Boot & rother" (*i.e.* boat & rudder).—Thomas Adams of Tydd St. Giles, Cambs.  
 (59 is from Brit. Mus. Egerton MS., 2412, the remainder from Mr. Henry Cooper's roll.)

so that irrespective of the actual ownership at any given time it would have been a quite convenient method for use in conversation or writing to speak of "the abbot of so-and-so's mark." Such an expression would have been easily understood by Swan-owners of any period, while any other reference might entail a long and not easily understandable description or the use of a personal name, which might be that of a new-comer or a non-resident owner and so there could easily be a doubt as to which game was meant. The manorial marks of east Norfolk and Suffolk (*vide infra*) would of course be always spoken or written of by their manorial names.

THEIR AGE.—It is quite problematical, I think, whether formal rolls of Swan-marks, as kept by district Swan-herds, were really in use before 1483 (*vide infra*). Most marks are known to us as they are given on rolls of sixteenth and early seventeenth century date; very few of these are so early as 1520 or so late as 1680, and the roll in the Public Record Office is the only one I have seen that with any probability is a product of the late fifteenth century. There cannot be any reasonable doubt, however, that many of the marks recorded in them had their origin at a much earlier date. A good many, by the names that they still appear under, go back with certainty to the middle of the fifteenth century, and probably a great deal earlier still. I have already drawn attention (*B.B.*, XIV., p. 178) to the one that appears to be the earliest to which a fairly definite date can be given, *viz.*, *circa* 1370, while the earliest mention of a mark occurs in the Patent Rolls for 1276 and their use can be inferred from an entry in the Close Rolls for 1246 (*B.B.*, XVII., pp. 175, 177).

RIGHT OF POSSESSION.—Unlike the Sturgeon, which was constituted a royal fish by Act of Parliament in the reign of Edward II. (1307–1327), we have no knowledge as to when the Swan became a royal bird, but there is evidence from Giraldus Cambrensis that it was already accounted so before 1186 (*B.B.*, XVII., p. 180). Strictly speaking, therefore, no subject could have property in Swans except by grant from the Crown, and the possession of a Swan-mark was definitely so limited in the Year Book of 7 Henry IV. 9 (1405–6). There is, however, evidence in the preamble to the statute of 22 Edward IV. (*B.B.*, XIV., p. 176) that this limitation was more honoured in the breach than in the observance, in that the keeping of Swans and the use of Swan-marks had at that date (1483) to a considerable extent passed into the hands of people of mean estate. The statute sought to correct this

by enacting a property qualification, without which no one could legally keep Swans. We may be sure that on the passing of this Act there was a general examination of the qualifications of Swan owners, for the Act allowed anyone possessing the necessary estate to seize the Swans of those unqualified and retain half the number for his own use, handing over the rest to the royal Swan-herd. The institution at this time of formal rolls of marks to be kept by him, would be an effective means of checking the qualification of owners. An interesting exemption (and the only one) to the operation of this Act was granted by Richard III. in the first year of his reign on petition by the inhabitants of Crowland. The statute remained in force until repealed by the Game Act of 1831. Though strictly speaking the right to use a Swan-mark could only be granted by the Crown, as a matter of practice they were allotted to qualified persons by the royal Swan-herd, who delegated his duties in this, as in every other respect, to his deputies, whom he appointed throughout the country. Many owners no doubt were unable to show a grant from the Crown when their ownership rights were enquired into, but they had the alternative of asserting a right by prescription, *i.e.*, long continued use or enjoyment, which, if they could prove, would be perfectly legal and effective. There is every probability that at the time of the passing of the Act a good many would have been in a position to do this. In special cases grants were made by the Crown itself up to quite recent dates. The Dyers' Company possess one of the time of Queen Anne, the Town of Maidstone obtained its first grant in its charter of 1619 and this was renewed in the subsequent charters of 1682 and 1747.

Once legally obtained the Swan-mark became the personal property of the owner, which he could give or sell to any qualified person, or devise in his will to whom he chose. In the absence of specific bequest it passed at his death to his heir. A curious exception to the personal character of the possession seems to have existed in the case of certain marks in use in the Broadland area of Norfolk and Suffolk. These were an appendage of the manors whose names they bore, and though ownerships changed from time to time, the Swans and the marks followed changes of ownership of the manors only and were never sold or devised apart from it. In these cases the marks are always to be found on the Swan-herds' rolls under the names of the manors to which they belonged and if a personal name is recorded at all it occurs only as a secondary title.

CHANGE OF OWNERSHIP.—Change of ownership of a Swan-mark, which naturally included also the whole of the game of Swans bearing that mark, was technically known as alienation and could be effected in five different ways:—

- (1) By direct descent to the heir from his ancestors.
  - (2) By marriage to a widow or heiress of a late owner.
  - (3) By will.
  - (4) By deed of gift or sale.
  - (5) By confiscation and subsequent grant.
- (1) Alienation by descent was, of course, the most frequent method, and where, as was most frequently the case, the eldest living son was the heir, the Swans and mark passed normally to him with the other properties on the death of his father. Under these circumstances we find no mention of them in wills, but in numerous instances this alienation can be traced by the comparison of marks and names in Swan-rolls of different dates.
  - (2) Though perhaps not actually very uncommon there are but very few instances recorded of the ownership of Swan-marks by women, and probably most of them (as indeed is recorded in one or two instances) were widows. On the other hand alienation by marriage can be traced in numerous instances, in one or two to widows of former owners, but in the majority to a daughter and heiress or co-heiress.
  - (3) Where it was the desire of a testator to split up his game of Swans amongst his children or others or to bequeath them to other than his heir, it was necessary for him to make provision accordingly in his will. Of this numerous instances have come to light. Margaret Paston's will (1481-4) has been already quoted by Stevenson (*B. of Norfolk*, III., p. 103) and need not be repeated, but the following are typical examples:—

" 16 April 1530. I Thomas Dykynson of Leeke . . . Also I wyll that Margaret my wyff have my swannys and my swannemarke to the term of her lyff; and then to remane to John my sonne. Yff he dye or he cum to lawfull age, I will the swannys with the marke be solde, and the money to be devydyd betwyxt my ij daughters."

(*Lincoln Record Society*, Vol. X.)

The will of " John Wesled of Braytoft in the countie of Lincolne, gent.," dated September 8th, 1603, and proved April 2nd, 1606.

" I give to my said grandchild William Wesled my swanne mark together with all my swannes and signittes yonge and olde to the same marke belonginge."

(*Lincolnshire Wills*, II., p. 11.)

The will of Richard Buckworth of Wisbech, Cambs., dated October 28th, 1506, and proved February 7th, 1506-7.

"It. I geue to the same Edmund my son my Swanne marke of the hokys in fee symple."

(P.C.C., Register 19 Adeane).

The following example is particularly interesting as throwing light upon the ownership of certain marks, which is otherwise somewhat mysterious.

"25 April, 1527. I Thomas Hippe of the parishe of saynt James in Sutton in Holond . . . I bequeth my marke of Swanes to the chapell of St. James for to kepe an obiit yerly upon the Fryday bfore Care Sondag, aftyr the forme of Lawrence Malles will, for my soule and all my good frendes soules."

(*Lincoln Record Society*, Vol. X.)

The Swan-mark of the Church of St. James in Sutton is given on several extant rolls, as are those also of St. Windreda of March, St. John the Baptist of Parson Drove, St. Clement of Upwell and Benwick in the Fenland area and Stalham in the Broadland area. A curious quartette of marks are also given on rolls of the latter district as belonging to "Our Lady's Light of" Hickling, Billockby, Acle and Caister respectively. They no doubt had their origin in the same way through the will of some pious testator, the profits of the Swans being used for the upkeep of the lights before the image of the Virgin in the respective churches.

- (4) There can be no doubt from a study of different rolls belonging to the same district, but of different dates, that a great deal of selling and buying of Swans and marks took place. The frequent practice of buying odd cygnets at upping time, in order to effect a change of blood or to increase the stock, was a comparatively simple matter, and could be done on a cash basis in the presence of a given number of fellow-owners and the royal Swan-herd, who thereupon placed the new owner's mark upon the hitherto unmarked bird and it at once became his property. The purchase of a game of Swans and its mark was a very different matter and had to be carried out in a similar way to the conveyance of land or tenements by formal deeds, duly signed, sealed and witnessed. Being private documents, examples are exceedingly difficult to find, and two only to my knowledge have ever been published. One, dated 1646, from Robert Ladde, alias Baker, of Terrington to Anthony Williamson of Tilney, was printed in *Eastern Counties Collectanea*, I., p. 77 (1872-3); the other dated



1656, from John Beke, alias Hall, of Holton Holgate to Richard Skepper of the same, in *Lincolnshire Notes and Queries*, V., p. 91. There are four examples in the British Museum and I have copies of four others from private sources. A single example must here suffice to illustrate this method of transfer, and I take Brit. Mus. Add. Ch. 25,914, as being the earliest, *viz.*, 1556.

" This bill made the xviiij daie of februarie in the secunde and thrid yeres of the Raignes of oure soueraign lorde and ladie Phillipp and Marie by the grace of god Kinge and quene of Englande ffrance Naples Jerusalem and Irelande defenders of the faithe Princes of Spaine and Cicilie Archdukes of Austria Dukes of Millane Burgundie and Brabarte counties of Haspurge flanders and Tiroll Witnessith that I Sr walter Mildemay of Apethorpe in the countie of Northampton knighte haue bargayned and solde and by these presents dothe barginde and sell vnto Michael Beale of Stangre in the countie of huntington yoman all that my righte and interest I haue in a marke of Swannes called the Skourge late belonginge to the monasterie of Crowlande for the some of ten poundes of lafull money of England which some of ten poundes I the saide Sr walter Mildemaye do confesse to haue receyued the daie of the makeinge hereof In witnes wherof I the above named Sr walter Mildemay haue sett to my hande and scale the daie and yere above written."

[Signed] " Wd. Mildmaye."

[No witnesses.]

Several later examples are considerably longer and more elaborate.

- (5) Confiscation and re-grant was a comparatively rare occurrence. The offences under the Swan laws that carried the penalty of confiscation were lack of the property qualification, failure to pay the alienation fee and the deliberate forgery of a Swan-mark. In the troublous times, however, of the fourteenth and early fifteenth centuries not a few people on the losing side suffered the penalty of attain, with or without the loss of their heads. Under attain the lands and other properties including Swans and marks of the attainted fell to the Crown. More than one member of the house of Howard met with this misfortune and so we find on one of the British Museum Swan-rolls over one of the marks of the Duke of Norfolk the significant entry: "Dux Norik, ye Kings." I have only been able to find three instances so far of a re-grant of confiscated Swans. Two occur in the Patent Rolls under date 1400 and the third is in the British Museum Harley MS. 433 (f. 217b). This is described as a Register of the Grants, Warrants, etc., passing the Privy Seal, Royal Signet or sign

manual during the reigns of Edward V. and Richard III. and the Grant is recorded as follows :—

“ A commission directed to al maires Sheriffs Eschetors Bailieffs Constables Swanherds & all other hauing the Rule of fresshe Ryuers and Waters in Somerset shire especially in the fresshe Waters or Ryuers of merke more Cotmore and more & al other Waters there Reciting that the King hath given al Swannes in the said waters late apperteynyng to the Marques Dorset and Sr Giles Dawbeney nowe in the Kings hands by reason of theire forfaictures to my lord priuie seale Yeuen at Westm. the IX day of May Anno ij<sup>do</sup> ” [Richard III, *i.e.* 1485].

**ALIENATION FEES.**—By whatever means an alienation took place the new owner had at once to pay a fee of half a mark to the King's Swan-herd and one of fourpence for registering each separate mark in the roll. In a paper in the *Sussex Archaeological Collections*, XVII., p. 216, it is recorded that the successive Bishops of Chichester in the seventeenth century paid this alienation fee to the Water Bailiff of the Arun on taking up their residence at Amberley Castle. On receipt of the fees the Swan-herd gave a receipt and an allowance of the Swan-mark. In some cases this appears to have been a very formal document and in others merely a small slip of parchment stating that the mark had been entered or allowed, but in either case a drawing of the mark was annexed. A contemporary copy of the more formal type is entered at f.403 of Harley MS. 4116 in the British Museum thus :—

“ A Copsy of ye Allowance of Mr Coles

August the 15th 1662



Reed then of John Cole of Sutton in y<sup>e</sup> Isle of Ely and County of Cambr gent the sume of six shillings eight pence for fees due for the alienacon and allowance of his swanne marke called & knowne by y<sup>e</sup> name of the Crosse Bowe and bolt with one gapp as y<sup>e</sup> same is described in y<sup>e</sup> said margent of these presents, whereby hee ye said John and his heires and deputye or deputyes under his hand & seale appointed assigned, shall & may yearely at times appointed haue all priuledge of Vping, marking & notifying all his & their Swannes & Cygnetts in any of the rivers, waters, brookes & pooles w<sup>thin</sup> y<sup>e</sup> Countyes of Bedf., Huntington, Cambr. & y<sup>e</sup> Isle of Ely or elsewhere within y<sup>e</sup> Realme of England. In witnesse whereof I haue hereunto sett my hand.

ol. 6s. 8d.

John Heron.”

In the example published by Mr. Edward Peacock in the *Archæological Journal* (XLII., p. 19), the Swan-herd has made

use of an earlier piece of parchment containing a drawing of the mark and endorsed it :—

“ I haue entred this marke in my booke Jan. 30. 1651, and haue received my fee which is 6s. 8d.

Geo. Hill

Swannerd to ye Commonwealth.”


Sir Henry Maxwell Lyte in his *History of Dunster* (p. 77) figures the Swan-marks of Sir John and Sir Andrew Lutterell from a similar slip of parchment. Beneath them is written :—

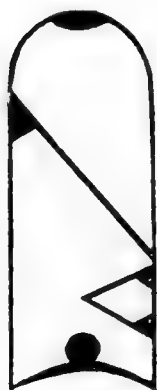
“ These were the markes w<sup>ch</sup> theise men above writen had upon the beekes of their swanes belonginge unto the Castell of Dunster by inheritance and alwayes kepte at the Mere by Glastonberrye. Yt is good to renewe yt. S.L.”

It seems probable that this was issued to one of the nephews of Sir John who succeeded to the property after the death of the latter's widow in 1588.

These small documents are exceedingly rare, and any that survive are naturally for the most part in private hands and difficult to find. The above are the only examples I have come across.

DIFFERENCING.—By making comparison between marks recorded on rolls of the same area, but of different dates, certain marks otherwise identical are found to differ from each other in certain minor details, and where full names are recorded these differences are seen to accompany changes of ownership. It is convenient to borrow the heraldic term “ differencing ” to express shortly this process of altering marks. It was clearly of advantage to owners who took an interest in their game to have some means of knowing the birds of the old stock (*i.e.*, those they succeeded to, from those bred under their own ownership, and so presumably this system of differencing came about. It is very clearly marked in the case of some of the Fenland marks and there is evidence that it was also used in the Thames area, in both of which many marks were very elaborate. In the case of the Thames the material available is far less extensive and so evidence of the custom is less easy to find. On the other hand, in the Broadland area, though material is plentiful, the marks themselves are much more simple and so hardly lend themselves to the practice, while confusion would by it be very easily brought about. The existence of this practice of differencing, deduced from a study of marks themselves, is confirmed by one or two items of documentary evidence. Thus, it is recorded in the Corporation Books of New Windsor (extracts by Ashmole, Bodl. MS., Ashmole 1126, f.36d.) that in 1505 John Scott of Dorney, Bucks, presented to the Guildhall of

Windsor an adult cock swan of his mark, "Whervppon at Vpping season next folowinge the seid Meior and his Brethern w<sup>th</sup> the Communaltie was admitted to the seid Cok by Harry Wykes M<sup>r</sup> deputie for yt tyme being of the hole game w<sup>th</sup> in Tamise aforeseide. Which gaf us an addicon to the same Cok y<sup>e</sup> is to wete this Merke  callid an Oylithole, the 9th day of August and the yere aboue seid."



61.



62.



63.



64.

61 was one of the marks of John Death of Gosberton, Lincs, and passed at his decease to his second son Robert, who differenced it by omitting the nick at the distal end of the bend.

62 was the mark of Adlard Welby of Goxhill and Gedney; his eldest son succeeded to Goxhill in N. Lincolnshire, and the Gedney estates in S. Lincolnshire with the mark passed to his second son, Sir William, who differenced the mark by reversing it and adding a foot mark "one heele [*i.e.*, hind-toe] cut of," (63).

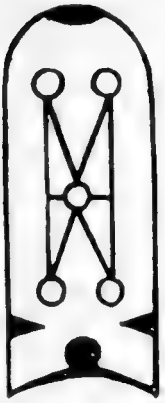
64 was the mark of Thomas Wren of Haddenham, Isle-of-Ely, whose widow married William Medley. The latter differenced the mark by omitting the annulet.

(61 and 62 are from Add. MS. 6301; 63 and 64 from Egerton MS. 2412.)

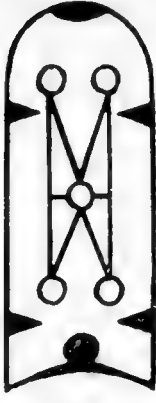
Amongst a series of orders made at a Court of Swan-mote held at Wisbech, Cambs, on October 6th, 1587, provision is made for the due recording of these difference marks thus:—

" . . . for euery old mark being alowed to haue any new addition hee [*i.e.*, the King's Swan-herd] to haue for entrance of the same of the owner of the marke, or farmer, 2s. 6d."

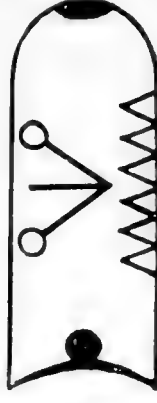
(Bodl. MS. Add. c. 200). In the deed of sale of a Swan-mark, already referred to, by Robert Ladde, alias Baker to Anthony Williamson, 1646, the practice is clearly referred to in the following sentence, where R.L., a. B. sells to A.W. "All my Swannmarke comonly called the Hammer-head and Roman R: with all other additions unto the same belonging or in any waies appertaining."



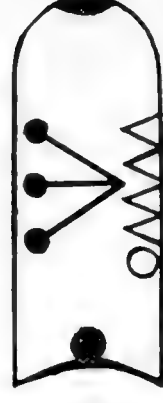
65.



66.



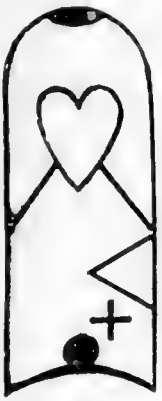
67.



68.

65 was the mark of Robert Everard of Walpole in Marshland, Norfolk, and passed to his eldest son Henry, who differenced it by the addition of two extra nicks (66).

67 was the mark of Humphrey Stafferton of Staverton Manor, Berks, whose daughter and heiress Eleanor married Robert Loggins of Staverton, who differenced the mark as shown in 68. (65 is from Add. MS. 6301; 66 from Add. MS. 6302; 67 and 68 from the Chetham Library roll.)



69.



70.



71.

69 was the mark of Robert Tighe of Deeping St. James, Lincs, whose daughter and heiress Alice married William Lacey of Deeping St. James, who differenced the mark by reversing it and placing the cross distal to the triangle (70). William Lacey in turn left a daughter and heiress who married Sir Henry Cholmeley of Easton, near Grantham, who again differenced the mark by turning it back again and omitting the cross (71).

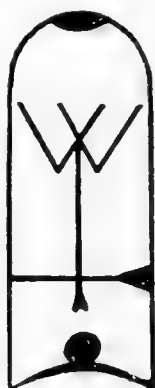
(69 is from the Rev. H. S. Marriott's roll; 70 from the Wisbech Museum roll; 71 from Add. MS. 6301.)

Confining ourselves chiefly to Fenland marks, it is clear that a very large number consist of a main or central design, which was evidently the mark proper, and one or more subsidiary items, amongst which the above-mentioned variations are

mostly found. These, which are the difference marks, consisted of nicks, triangular or semicircular on one or both margins of the upper mandible, annulets, roundels and small crosses or saltires. Differencing might then be carried out by the addition or subtraction of one or more of these subsidiary marks. Occasionally it was effected in other ways, but examples of these are rare. Where the main mark consisted of an asymmetrical design, differencing could be done by reversing it. In a few cases it was done by the addition of a lower mandible mark or foot mark.



72.



73.



74.

Perhaps the most remarkable instance of differencing is furnished by the above three marks. 72 was that of Edward Bestney of Soham, Cambs., who left two daughters and co-heiresses, Margaret and Joan. They married Edward Bernes of Soham and Simeon Steward of Lakenheath, Suffolk, respectively. The former differenced the mark by omitting the distal of the two nicks (73), the latter by doing the same, but also by adding two more on the left side (74). Thus two easily distinguishable marks were formed from the one original.

(72 is from Add. MS. 4977; 73 from Add. MS. 6302; 74 from Add. MS. 6301.)

REVISION OF MARKS.—In order that strict supervision might be exercised over the qualifications of owners and to the intent that all alterations of marks and changes of ownership should be duly recorded, it was the custom from time to time for the Commissioners of Swan-mote to make orders accordingly. Thus at a Court of Swan-mote held at Wisbech on October 6th, 1587, the Commissioners ordained as follows:—

“It is ordered and Decreed that all books & swannmarks bee reformed, corrected, amended and made vniforme vnto one booke w<sup>ch</sup> shall remayne in y<sup>e</sup> hands of the M<sup>r</sup> Swanner or his Deputy for y<sup>e</sup> tyme being, w<sup>th</sup>out varying ffrom the same either markeing, placeing of Gapps, ticks, oylet holes, slitting of webs, cutting of Heels, or claws: And that all owners ffarmers and Deputyes of

swans shall reforme all such books or Rowles as they haue vnto the sayd Mr Swanner or his Deputyes booke & shall for euer aff[t]er soe nigh as possibly by any meanes they may follow the order of the same in marking, Gapping, ticking, oleting, sliting of webs, cutting of heeles or clawes vpon payne to forfeit to y<sup>e</sup> Chiefe L<sup>d</sup>: & feeld aforsayd for euery white swan found by Jury to bee faulty in such cases 2s. & to the end that the sayd Mr Swannard or his Deputy may make them such a perfect booke as above sayd agreeable to the truth of the owners markes It is ordered & decreed that the Cheife Deputy swannard shall cause Proclamation to bee made in the market before Christtyde next that euery such owner of swanes his farmer or deputy by the purification next after it doe bring or cause to be brought to the Cheife Deputy Swaner his seuerall marke or marks fairly Drawne vnder his hand that thervpon the Cheife Deputy Swannard may marke his sayd booke to bee shewen & agreed vpon before the next generall swanning tyme & for Default of not soe bringing their sayd markes vnto y<sup>e</sup> sayd Deputy by the tymes aforesayd, euery owner farmer or Deputy soe in default to forfeit for the first tyme to the L<sup>d</sup>: & feeld xijd. and for the second tyme iijjs. 4d. And it is likewise ordered & decreed that euery owner ffarmer or deputy shall pay to the cheife Deputy Swanner for euery his marke or marks soe to be entred & the booke kee[p]ing of the same at the next generall swanning after such entry thereof made the sum of ijs. 6d." (Bodl. MS. Add. c.200.)

**METHODS OF MARKING.**—All marks were of course of the nature of scars, certain foot marks being in addition permanent deficiencies of various shapes. The most usual method of production was undoubtedly by cutting with a sharp knife, as is still practised on the Thames and Yare to this day. Sir Joseph Banks, in a MS. introduction that he wrote to the Swan-roll, Add. MS. 6302, in the British Museum, thus describes the process:—"In the autumn of 1820 Mr. Chapman of Marshchapel [Lincs] informed me that in his youth about 40 years ago the custom of marking swans was still kept in the Marsh Towns in his neighbourhood and that he had attended when the persons employed by the owners met together and marked the birds. He shewed me the manner of marking, which he did by cutting with a sharp penknife a double line through the skin that covers the beak and stripping off the skin between."

It has been stated that marks were sometimes rendered more permanent by the rubbing in of gunpowder after the cuts had been made. Whether there is any real evidence of this I have not been able to discover.

Henry Best of Elmswell, Yorks, in his "Farming and Account Books" (1641) (Surtees Soc., XXXIII., p. 122), wrote: "Our marke is three holes boared with an hotteswipple in the right side of the nebbe, and a gagge cutte betwixt the two uppermost holes, viz., that next the head and the other."

In the picture of Swan-marking given in Gurney's *Early Annals of Ornithology*, (p. 71), which is taken from an illuminated MS. of about 1340 in the Bodleian (MS. 264, f.124.v.), the bird is being foot-marked by hammering a punch through the web.

Some marks are so intricate that one cannot but wonder whether in some cases they were impressed by means of a special branding-iron. There is, however, no evidence on the point. It is very difficult to imagine a Swan-herd, however skilful he might be with a pocket-knife, making much of a success of marks 17, 19, 42 and 65, for instance, on the bill of a live and struggling Swan, and there are plenty of other marks even more elaborate.

(*Correction* : In the heading at top of p. 269, for " Names " read " Arms.")



# ON THE EGG-LAYING OF THE GRASSHOLM GANNETS.

BY

BERTRAM LLOYD.

WHEN visiting Grassholm on July 21st, 1925, Mr. Charles Oldham and I were struck by the number of nests in the colony of Gannets (*Sula bassana*) which contained either two eggs or two young birds. Owing to the lateness of the date the densely crowded nests showed wide variation in their contents, which ranged from eggs or still blind nestlings to well-grown heavy young birds in down, able to bite or hiss at an intruder.

So far as we can discover, virtually all authorities and observers agree in stating that the Gannet normally lays but a single egg.\* R. J. Ussher, however (*The Zoologist*, VIII., 96), has recorded that when visiting the breeding-station at the Bull Rock, Kerry, early in June, 1884, though each nest was found usually to contain but one egg, he noticed two containing two eggs each. "On emptying one of these pairs," he wrote, "I found one egg fresh, the other decidedly sat upon, so that they may have been laid by different birds." J. H. Gurney (*The Gannet*, 1913, p. 34), while remarking that two eggs are not infrequently found in the same nest "though not necessarily laid by the same bird," also cites a couple of instances—which he calls "very unusual"—of two incubated eggs being discovered in a single nest.†

\* E.g. Seebohm (*Brit. Birds*, 1885), Newton (*Dic. of Birds*, 1896), Saunders (*Manual*, 1899), F. C. R. Jourdain and F. B. Kirkman (*British Bird Book*, IV., 1913), T. A. Coward (*Birds of British Isles*, 1919-20), etc. W. H. Turle (*The Ibis*, 1891, p. 1) noted that he "found only one egg in a nest" in the gannetry on Little Skellig, which he estimated at "several thousands"; T. H. Thomas (*Cardiff Nat. Soc. Transactions*, Vol. 22, 1890) saw only one egg per nest in the Grassholm colony on May 24th, 1890; and T. W. Proger and D. R. Patterson (*Cardiff Nat. Soc. Trans.*, Vol. 38, 1905), writing of the same colony, affirm that "they lay but one egg." Finally, the encyclopædic edition of Naumann (*Vögel Mitteleuropas*, Vol. XI., 1905) states definitely that the Gannet "never lays more than one egg at a brood"; and the *Practical Handbook of British Birds* (II., 408, 1924) with exemplary caution says: "One only, cases of two being probably due in most cases to two hens."

† One is from Stack Lii (St. Kilda), no locality being given for the other. The *hatching* of two eggs in one nest, and its consequences, do not appear to have been studied yet, the finders of such pairs generally seeming more inclined to blow them—doubtless in order to test how far each is incubated.

In this connection it may be worth while to draw attention to the fact, recorded by W. Beebe in his *Galápagos* (1924, p. 268), that a near relation of our Gannet, the Bluefooted Booby (*Sula nebouxi*), frequently lays two eggs. Of one colony of these birds he writes that "there were more sets of two eggs than one, and about the same relative proportion of young birds."

As regards the Grassholm gannetry, though but a small proportion of the nests still contained eggs on July 21st last, we noticed—without making a very careful search—four of them containing two eggs, while a considerable number held two young birds. Of the latter, the pair in each nest, so far as we could see, differed little if at all from one another in age, though in some cases one appeared to be slightly larger and further developed than his co-occupant. All about us nestlings were being fed by their parents, who were constantly flying in with fish—among which we noticed garfish, gurnard, herring and mackerel in plenty; and although the usual unfortunate exigencies of time and tide precluded our making observations of any value as to the number engaged in feeding each pair of nestlings, we were forced to the conclusion that a considerable percentage of the Grassholm Gannets must either lay two eggs at one brood or indulge a very marked proclivity for a dual sharing of nests.

This latter possibility, it must be pointed out, can hardly be accounted for on the score of lack of nesting-room; for although the colony in its earlier years doubtless made use of typical sites and nested only on the tops of rock-stacks and on cliff-ledges, it appears now to have spread somewhat inland. Thus we found that many of the nests on the outskirts were not built upon rock at all, but on the thin top-soil which covers the greater part of the island, supporting a vegetation consisting mainly of a bush growth of Orache (probably *Atriplex glabriuscula*) and a couple of rough grasses (*Festuca rubra* and *Holcus lanatus*).

Much of this ground is honey-combed with Puffins' holes; but the immediate hinterland of the Gannets' breeding-station affords ample space for the colony to continue still further back from the cliffs the expansion already begun.

# NOTES

## BREEDING OF THE ICTERINE WARBLER IN ENGLAND.

At the February meeting of the British Ornithologists' Club I exhibited a clutch of three eggs of the Icterine Warbler (*Hippolais icterina*) taken by myself at Mildenhall, near Marlborough, Wiltshire, on May 8th, 1907 (*Bull. B.O.C.*, XLVI., p. 74). The nest was actually found on May 3rd, when the female was flushed off two eggs. It was in an alder, about four feet from the ground at the junction of several branches which formed a sort of cup, and was composed of moss and wool, with one or two scraps of birch bark on the outside as well as what appeared to be a piece of dirty yellowish paper. Owing to school restrictions I was not able to revisit the site till two days later, when T. C. K. Moore accompanied me in order to photograph the nest. There were then three eggs, and the hen flew off as before, but kept skulking within a few yards. Next day we went out again with the camera, but had considerable difficulty owing to the undergrowth and an inadequate tripod. Two days later the eggs were cold and no bird visible, and three days later it was evident that the nest was deserted.

We spent a good deal of time hunting for a second nest, but without success. The nest was subsequently presented to the College Museum. Although on two or three previous occasions the eggs of some species of *Hippolais* have been found in England, they have all been ascribed on the evidence of the eggs to *H. polyglotta*. In this case we saw nothing of the male bird, and, having no previous experience of either species in the field, should not have been able to distinguish one from the other. However, the eggs are quite typical of the Icterine, rather paler than usual and showing little of the purplish-red tinge so conspicuous in *H. polyglotta*, and are also decidedly larger than ordinary eggs of that species, so that there is hardly any doubt that in this case it was the Icterine, and not the Melodious Warbler, which attempted to breed with us. It is rather significant that while only five specimens of the Melodious Warbler have been obtained in the British Isles, about thirty-five Icterines have been recorded.

G. PYE-SMITH.

## FLEDGING-PERIOD OF THE REDBREAST.

A NEST of the Robin (*Erithacus r. melophilus*) which I had under observation last year (1925) had three out of six eggs hatched at 7.30 a.m. on May 3rd. Early in the morning of May 17th I again visited the nest and found that it contained six young. The nest was empty at 7 a.m. on the following day, so that the fledging-period was apparently fourteen days. I am inclined to think that in the case of the Robin, sitting is occasionally commenced before a clutch is complete.

SYDNEY G. POOCK.

LESSER SPOTTED WOODPECKER IN  
CARNARVONSHIRE.

IN view of the statement in Mr. H. E. Forrest's *Fauna of North Wales* that there is no authentic record of the occurrence of the Lesser Spotted Woodpecker (*Dryobates minor comminutus*) in Carnarvonshire, it may be of interest to state that I watched a single bird of this species in the woods at Gloddaeth on April 5th, 1926. I have frequently seen the Great Spotted Woodpecker in the same woods, but this is the first time in twenty years of constant observation that I have set eyes on the smaller bird with a barred back.

It may also be of interest to add that Nuthatches are nesting in the same woods. I first observed Nuthatches in the wood early in the year 1908 (*cf. B.B.*, Vol. II., p. 59), and curious to relate they are this year occupying the same tree.

RICHARD W. JONES.

## SPARROW-HAWK CATCHING A SNIPE.

WHILST visiting a small marsh near Felsted, Essex, on March 30th, 1926, to see if any Snipe (*Capella g. gallinago*) were nesting, I put up four birds. They flew away and then circled back. Suddenly a hen Sparrow-Hawk (*Accipiter n. nisus*) appeared, and travelling at a great pace seized one of them within twenty yards of me. It carried the Snipe about half the distance towards me, but seeing me released it, apparently unhurt, and both went off in different directions. This is the first time I have known a Sparrow-Hawk take a Snipe.

J. H. OWEN.

FURTHER NESTING OF TUFTED DUCK IN  
CUMBERLAND.

SINCE the recording of the nesting of the Tufted Duck (*Nyroca fuligula*) in Cumberland by Mr. F. H. Day (Vol. XVI. p. 109), this species has continued to nest within the county.

At the pond south of Carlisle where the first nest was found by me on June 14th, 1922, my friend Ritson Graham discovered a clutch of nine eggs on May 29th, 1924.

On a fell tarn towards the eastern limits of the county, a winter resort of the species, I observed birds to stay as late as May 22nd, 1924. On June 7th, when I returned to search for possible nests, two pairs of Tufted Ducks were the only duck on the water. My companion and I eventually found their nests in a very swampy bed of sedge, barely six yards apart and ten or twelve from the water margin.

The site had been entirely submerged through the rising of the tarn level on the previous week-end and consequently abandoned.

The nests contained eight and six eggs respectively. Sufficient down and breast-feathers had been left by the receding water to establish ownership with certainty.

During the season of 1925 I failed to find any signs of Tufted Ducks breeding at either of the above localities.

ERNEST BLEZARD.

#### SPOONBILL IN DORSET.

On March 19th, 1926, after easterly winds, I saw a fine adult Spoonbill (*Platalea l. leucorodia*) on Lodmoor, near Weymouth. The bird frequently consorted with some Herons, and was still there on March 20th, 27th and 29th, but I did not see it on April 12th, by which date it had probably passed on.

F. L. BLATHWAYT.

#### SPOTTED REDSHANKS IN SUSSEX.

On March 23rd, 1926, I watched a pair of Spotted Redshanks (*Tringa erythropus*) in a marshy field adjoining the sea, near Worthing. They were in company with Common Redshanks (*T. totanus*) so comparison was easy, and I was able to note their greater size, longer bills and legs, and their dark secondaries. One of them had a pure white throat and upper-breast, whilst the other had these parts mottled and some very conspicuous black patches on its belly and flanks.

D. L. DUNKIN.

WOOD-LARK IN PEMBROKESHIRE.—Mr. H. A. Gilbert writes that he watched a Wood-Lark (*Lullula arborea*) singing near Tenby on March 7th, 1926. The species appears to have decreased considerably and to be chiefly known as a winter-visitor to the county, so that evidence as to its present status as a breeding species seems to be important.

RED-BACKED SHRIKE BREEDING IN PEMBROKESHIRE.—Mr. H. A. Gilbert reports that he found a Red-backed Shrike (*Lanius c. collurio*) feeding young near Pembroke in July, 1924, and Major W. M. Congreve informs us that during six years residence in the county he only met with one pair, and that had a nest of five eggs at Angle, eight miles west of Pembroke, on June 2nd, 1908.

SCANDINAVIAN CHIFFCHAFF IN SOMERSETSHIRE.—Mr. A. L. Butler exhibited at the February, 1926, meeting of the British Ornithologists' Club (*Bull. B.O.C.*, XLVI., p. 68), a male example of *Phylloscopus collybita abietinus*, which had been obtained by Mr. F. H. L. Whish at Lympsham, Somerset, on April 6th, 1925. Although this form of the Chiffchaff has been detected on a number of occasions on various Scottish Islands there is but one previous record for England.

GARDEN-WARBLER NESTING IN PEMBROKESHIRE.—Major W. M. Congreve informs us that Mr. James Wynne found a nest of *Sylvia borin* just outside Pembroke on June 4th, 1907. The eggs are now in Major Congreve's collection and appear to be the only evidence of the nesting of this species in the county.

POLYGAMY IN THE ACCIPITRES.—In a previous note on this subject (*antea*, p. 180), reference was made to cases in which males of Montagu's Harrier (*Circus pygargus*) and the Hen-Harrier (*C. cyaneus*) had paired with two females of the same species, each having a separate nest, but at no great distance apart. Mr. L. S. Dear, of Port Arthur, Ontario, has kindly sent us details of a very similar case observed by him near Regina, Saskatchewan, in April and May, 1921, and reported in a note to the *Oologist*, XL., p. 167. The birds in question were the American Marsh-Hawk (*Circus c. hudsonius*). Two nests of this species, one with two eggs and another with five, were found about 150 yards apart, the discovery of the second nest being due to the excitement displayed by the male bird which had been very demonstrative at the first nest. Observations were made for about two weeks on these birds and although the male was frequently traced to both nests, no fourth bird was ever observed, and the possibility of another male being present seems very remote, especially in view of the fact that almost exactly similar cases have occurred in Great Britain in two species of Harrier. Of these the European Hen-Harrier, *C. cyaneus cyaneus*, is now regarded by most modern ornithologists as conspecific with the American Marsh-Hawk, *C. cyaneus hudsonius*.



# REVIEWS



*Problems of Bird-Migration.* By A. Landsborough Thomson, O.B.E.,  
M.A., D.Sc. (Witherby) 18s.

IN this book Dr. Landsborough Thomson sets out to give us a statement of the problems of bird-migration. No one could be better fitted to undertake such a task and we may say at once that he has presented them in a well-thought-out and so admirably arranged a manner that the result will be equally welcome to biologists, ornithologists and bird-lovers, while for students of migration especially it fills a long-felt want. This is no disparagement of Dr. Eagle Clarke's invaluable *Studies in Bird-Migration*, for the scope of the present book is entirely different. It takes cognizance not only of his work and that of other British observers, but also of American and Continental authors, some of whose writings have hitherto been out of the reach of many British students and but little referred to in our literature. Facts and data have accumulated to so vast an extent during the last thirty years that the time was more than ripe for a generalized and up-to-date statement of them, together with an authoritative indication of along what channels future investigations could be most usefully directed.

As an introduction, Dr. Thomson gives a most useful summary of migratory movements as they are exhibited in all the different branches of the animal kingdom. Following this, the book is divided into three main parts. The first of these deals with the known facts. These are divided and admirably summarized under their appropriate headings, so that a general knowledge of what is known about each aspect of migration can be readily found and studied. Part two describes first of all the two chief methods, viz. observational and marking, by which the necessary data have been ascertained, their importance and limitations, and the most useful lines in each along which future work might be directed. The author then passes on in succeeding chapters to detailed studies of the movements of particular species, and terminates with one on the general results of the marking method. In part three the main problems of bird-migration are stated and discussed. The different theories and assumptions of what may be briefly termed "the why and how" of migration are set out and discussed in the light of ascertained fact, and, while from their very nature some of them must ever remain in the realm of theory, the author points out how many are capable of solution by further observations concentrated in the right direction. The subject matter of each separate problem is shortly and usefully summarized at the end of each chapter.

An Appendix contains an essay on some practical bearings of the study of bird-migration, and in this we are glad to notice that the recently suggested and potentially mischievous theory of the conveyance of foot-and-mouth disease infection by bird-migrants has been duly examined and found to be not even established as probable.

An important and particularly useful feature of the book is the excellent bibliography given at the end of each chapter. Though this arrangement necessarily leads to a certain amount of repetition of references, this is more than counterbalanced by the great saving of labour to future workers, in that there will be no need for them to look

up a number of more general papers, when further detail is required about some particular aspect. In the lists on pages 53, 114 and 136 we note the omission, no doubt by inadvertance, of Vols. 32 and 34 of the *B.O.C. Bulletin*, though the *nine* migration volumes are elsewhere referred to.

The only misprint we have noticed occurs on p. 168, where it is stated that White Storks, native to Denmark, etc. "migrate in autumn south-westwards towards the eastern Mediterranean and return by a corresponding north-westerly route in spring"—N.F.T.

*Life Histories of North American Wild Fowl. Order Anseres (Part).* By A. C. Bent. U.S. Nat. Museum Bulletin 130, Washington, 1925.

MR. BENT continues to make steady progress with his valuable work on the Life Histories of North American Birds, and the present volume is the fifth of this series since the first instalment was issued in 1919. In plan it closely resembles its predecessors, the whole of the material being systematically arranged under two main headings, "Habits" and "Distribution" for each species, with subdivisions for all the varied information provided. This plan has many advantages: gaps in our knowledge of the life-history are apparent at a glance, and it is no longer necessary to read the whole article to ascertain some point in the economy of any given bird.

Particular interest is attached to this part, as in addition to about a dozen genera of Ducks, the whole of the American Geese are included, and all who have studied Palaearctic or Nearctic birds are aware of the extreme difficulty in working out the life-histories of these birds. Although much still remains to be done, the present work makes a very decided forward step in this respect, and we can congratulate the author on having got together a wonderfully complete series of photographs of nesting-sites, nests and young of this elusive group. In work of this kind collaboration is absolutely necessary, and much of the author's work is necessarily compilation. As regards the American breeding species this is exceedingly well done on the whole, but apparently Mr. Bent has confined his researches to English and American sources. Thus we find no reference in the Bibliography to B. Hantzsch's papers on the Bird-world of north-eastern Labrador (*Journal f. Ornithologie*, 1908, pp. 177 and 307) from which much might have been learned as to such species as *Somateria spectabilis* in North America.

Extra-limital species, such as the Whooper Swan, if they are to be treated at all, deserve something better than the very scanty and inadequate extracts given. In this case lack of material can hardly be assigned as the cause, as much has been written of the Whooper on its breeding-ground, yet all that is given is a paragraph from Cordeaux and Mrs. Gordon's account of the nesting of a pair in the Western Highlands, an exceptional case of nesting far outside the normal breeding range.

Mr. Bent treats of the two forms of Brent Goose under the names of *Branta bernicla bernicla* (L.) and *B. bernicla nigricans* (Lawe), but appears not to have grasped the significance of recent researches. Linne's type, as shown by Lönnberg, was obviously the slate-breasted bird which breeds in Siberia and migrates westward through Scandinavia. The presence of light and dark-breasted birds in Europe is amply accounted for by this stream of migrants meeting the light-breasted birds from Spitsbergen, without resorting to the fantastic



theory that *nigricans* intergrades with typical *bernicla* and migrates westward across Siberia! East American birds evidently belong to the same race as the Spitsbergen (light-breasted) form, which, according to Lönnberg, should be called *B. bernicla hrota*, and is obviously distinct from the typical form.

We regret that "F. O. Morris" is quoted as an authority on the life-history and habits of several species. As the fifth edition of his work is referred to, all details of importance were supplied by Tegetmeier, who compiled them from other sources. When original observations are available we fail to see the advantage of quoting a second-rate compilation, under the name of another. Newton's dictum (*Dictionary of Birds*, p. 44) that "By every well-informed ornithologist the *History of British Birds* of Mr. Morris has long been known to possess no authority" is admittedly not too severe.

The real value of this work, however, lies in the fact that we have now full and carefully classified notes on the life of this group of American birds, embodying all of real interest and importance which has been published in the *New World*, together with many original notes from different sources, and a series of photographs mainly illustrating their breeding-habits, which may be fairly described as unique.

F. C. R. JOURDAIN



# LETTERS



## THE CALL-NOTE OF THE CHAFFINCH.

*To the Editors of BRITISH BIRDS.*

SIRS,—With reference to Mr. W. H. Thorpe's note (*antea*, p. 283) on the call-note of the Chaffinch, I remember, as a boy, that my father used to say that the Chaffinch (*Fringilla c. caelebs*) sometimes used this Greenfinch-like call. I have myself heard it, once or twice, but very rarely in England.

At the end of June and beginning of July, 1925, I was in Switzerland in the Val d'Anniviers, Valais, first at Zinal, then at St. Luc, both these places being at about 5,500 ft. Here the Chaffinch was the chief singing bird, and I several times heard it utter this Greenfinch-like note. The forest in this district is, of course, coniferous.

It is possible that this note is not so rarely heard in England as is generally supposed, though it certainly is not common. It so closely resembles that of the Greenfinch that in places where both birds are common it may often pass unnoticed. H. W. MAPLETON-BREE.

## LIFTING POWER OF THE GOLDEN EAGLE.

*To the Editors of BRITISH BIRDS.*

SIRS,—I notice this very interesting subject is again attracting attention in your columns, and that one of your correspondents (*antea*, p. 259) remarked he is "unable to accept" the evidence of a man, he somewhat contemptuously refers to as a nameless "soldier," which I related in my letter on the subject (Vol. XV., p. 24).

But the man was not a "soldier," he was a Highland ghillie, of about 40 years of age, on a large estate in the north of Scotland, where he had spent his life—and then down south for the first time in training for a soldier—whose evidence on the point seems more useful than the opinion of any amateur naturalist.

I notice in the correspondence that my letter alone gives any evidence as to the actual weight of the object carried, taken at the time it was dropped. ARTHUR R. GILLMAN.

## REDSHANK'S METHOD OF OBTAINING FOOD.

*To the Editors of BRITISH BIRDS.*

SIRS,—On February 28th, 1926, whilst watching Redshanks (*Tringa t. totanus*) which had congregated on the soft mud left by the out-going tide I noticed one particular bird jump up off the mud twice in succession. Mr. F. G. Dell, who was with me at the time, noticed the same thing. The methods by which shore-birds obtain worms by stamping, vibrating the feet on the sand, or jumping, has to some extent been discussed in *British Birds* (XVI., pp. 228, 292, 316), but I am not aware of any reference having been made therein or elsewhere to the jumping of the Redshank in particular. SYDNEY G. POOCK.

## THE BIRDS OF SUFFOLK.

*To the Editors of BRITISH BIRDS.*

SIRS,—I have been at work collecting notes for a book on the "Birds of Suffolk" for many years past. May I appeal to any and all who may have any notes of interest, not necessarily of rarities only, on Suffolk birds to communicate with me. CLAUD B. TICEHURST.  
GROVE HOUSE, LOWESTOFT.

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